DISSERTATION

ON

A STUDY TO ASSESS THE EFFECTIVENESS OF SOYAMILK WITH HONEY CONSUMPTION ON REDUCING PHYSICAL AND PHYSIOLOGICAL SYMPTOMS AMONG THE POST MENOPAUSAL WOMEN WITH IN AGE GROUP 40-60 YEARS AT CHOOLAI CHENNAI

M Sc (NURSING) DEGREE EXAMINATION

BRANCH –IV COMMUNITY HEALTH NURSING

COLLEGE OF NURSING

MADRAS MEDICAL COLLEGE, CHENNAI – 600003.

A dissertation submitted to

THE TAMILNADU DR.M.G.R. MEDICAL UNIVERSITY,

CHENNAI – 600 032.

In partial fulfillment of requirements for the degree of

MASTER OF SCIENCE IN NURSING

APRIL 2016

CERTIFICATE

This is to certify that this dissertation titled **"A study to assess the effectiveness of soya milk with honey consumption on reducing physical and physiological symptoms among the post menopausal women with in age group 40-60 years at Choolai"** is a bonafide work done by Ms.V.Sangeetha II Year M Sc (N) student College of Nursing, Madras Medical College, Chennai – 600003 submitted to **The Tamilnadu Dr.M.G.R. Medical University, Chennai-32,** in Partial fulfillment of the requirements for the award of Degree of Master of Science in Nursing, Branch - IV, Community Health Nursing under our guidance and supervision during the academic period from 2014 – 2016.

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Acknowledgement

"Everything can be sacrificed for truth, but truth cannot be sacrificed for anything." -Swami Vivekananda

Nothing concrete can be achieved without an optimal inspiration during the course of work. There are several hands and hearts behind this work to bring it to this final

.I wish to acknowledge my sincere and heartfelt gratitude to the almighty God for this marvelous grace and praise for all wisdom, knowledge, guidance and strength throughout this work.. to bring it to the final stage and to achieve to complete this task effectively.

I wish to express my sincere thanks to Prof**. Dr.R.Vimala, MD**, Dean, Madras Medical College, Chennai-3 for providing necessary facilities and extending support to conduct this study, without which this would not have materialized.

I deem it a great privilege to express my sincere gratitude pt **Dr.V.Kumari, M Sc (N), Ph.D,** Principal, College of Nursing, Madras Medical College, Chennai for her tremendous help, tireless motivation to carry out my study successfully.

I express my sincere thanks to **Dr.R,Lakshmi, M Sc (N), Ph.D,** former principal,current Joint Director at Directorate of Medical Education for her for the meticulous support in selecting the topic and guiding me with our valuable suggestions.

I express my heartfelt thanks and deep sense of indebtedness to my esteemed teacher **Ms.J.S.Elizabeth Kalavathy, M.Sc. (N).,** Reader, College of Nursing, Madras Medical College, Chennai for her timely assistance and guidance in pursuing the study.

I wish to express my gratitude to **Mrs.G.Shanthi, M Sc. (N). Mrs.L.Shanthi, M Sc. (N), Community Health Nursing department,** College of Nursing, Madras Medical College for their valuable guidance in conducting this study.

I thank **Dr.Joy Patricia Pushparani, M.D,** Director, Institute of Community Medicine, Madras Medical College, Chennai-3 for the Support and assistance given to their possible manner to complete this study.

I special heartfelt thanks and sincere gratitude to **Dr. Senthil Nathan. M. B. B. S, D.P.H,** City Health officer, Public health department, Corporation of Chennai for granting permission to conduct the study in Choolai Urban area. I wish to express my gratitude **Dr. Devi Kala, M.B.B.S,** Medical officer Choolai health post.

I extend my sincere thanks to **Mr. Padmanaban M Sc., M Phil. (Statistics) P.G.D.C.A** Lecturer in statistics Madras Medical College, Chennai-3 for suggestion and guidance on statistical analysis.

It is my immense pleasure and privilege to express my gratitude to **Mrs. Ebi GoldaMary, M Sc (N),** Reader, Community Health Nursing, Madha College of Nursing, Kundrathur for validating this tool.

I extend my thanks to **Mr. Ravi, B. A, B.L.I.Sc.**, Librarian, College of Nursing, Madras Medical College, Chennai-3 for his co-operation and assistance which built the sound knowledge for this study.

My heartfelt thanks to all **clients participating** in this study, residing in Choolai urban community area in Chennai, for their fullest cooperation.A note of thanks to the Librarians at theTamilnadu Dr.M.G.R Medical University, for their help in providing needed reference materials which I required.

Last but not the least. I am always thankful to my parents and family members for their support in all times of ups and downs, their prayers, their blessings and their help rendered to me in completing my study successfully.

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ABBREVATIONS

DF	Degree of Freedom
SD	Standard Deviation
CI	Confidence Interval
Fig	Figure
H1 H2	Alternative Hypothesis
Mac (N)	Master of Science in Nursing
No	Number
$\chi 2$	Chi square
WHO	World Health Organization
NFHS	National Family Health Survey

ABSTRACT

TITLE:

A study to assess the effectiveness of soya milk with honey on reducing symptoms on postmenopausal women in selected area of Chennai.

About 80% of women between the age group of 45-55 yrs develop few or more menopausal symptoms that begin from months and proceeds to years after menopause.

Need for the study:

More than 60% of postmenopausal women in Choolai have been suffering from menopausal symptoms which affect their daily activities. There is a need of natural approaches to relieve menopausal discomfort and soya is considered as asuper natural food which contains Isoflavones (genistein, daidzein, and glycitein) are bioactive compounds with mildly estrogenic properties and often referred to as phyto estrogen that relieve the menopausal symptoms.

Objectives:

The aim of this study is to assess the pre and post test level of menopausal symptoms among the post menopausal women and to evaluate the effectiveness of soya milk in reducing those symptoms thereby associating with the selected demographic variables.

(Keywords: soya milk, menopausal symptoms, isoflavones, bio active compounds, phyto estrogens).

Methodology:A experimental study was conducted to find out the effectiveness of soya milk in reducing the postmenopausal symptoms among the women with in the age group of 40-60 years.60 postmenopausal women with symptoms were identified in selected areas of Choolai.

Research approach: quantitative approach.

Research design: Experimental pre test post test control groupdesign.

Sampling technique: Simple random sampling by lottery method

Sample size: 60 post menopausal women ,30 in control and 30 in experimental group with symptoms.

Study population: post menopausal women within 40-60 age group in selected areas of Choolai.

Data collection procedure: About 100 ml of soya milk was administered once a day in the mid morning for Two weeks. At the end of the fourth week symptoms were assessed in both experimental and control group using Menopausal Rating Scale.

Data analysis: Data analyzed through descriptive (frequency, percentage, distribution, mean, standard deviation) for demographic variable and inferential statistical (independent and paired 't' test chi square test) for clinical variables.

Study results: The mean before administration of soya milk was 17.17 and after administration were 10.27. The overall pretest and post test difference in control group is 3.9% and in experimental group it is 23.0%,

Discussion: This shows the effectiveness of soya milk on post menopausal symptoms. ($p<=0.001$).There is significant difference in mean pre menopausal symptoms and mean post menopausal symptoms,thus the hypothesis was proved

Conclusion:

The study was concluded with the findings that there is a significant improvement in women under the experimental group who consumed soya milk with a't' value 12.58($\leq p=0.001$) respectively.

CHAPTER I

INTRODUCTION

"Knowledge Comes From Experience, Information Is Not Knowledge, and the Only Source of Knowledge Is Experience"

------ ALBERT EINSTEIN

Aging is the natural progression of changes in structure and function that occur with the passage of time in the absence of known disease. Aging of the female reproductive system begins at 20 weeks gestation with regard to follicle atresia and proceeds as a continuum.

Menarche is the beginning of the menstrual function, puberty culminates in the onset of menstruation, the first period being called menarche(Myles). The timing of menarche is influenced by female biology, as well as genetic and environmental factors, especially nutritional factors.

Menopause means permanent cessation of menstruation at the end of reproductive life due to loss of ovarian follicular activity. It is the point of time when last and final menstruation occurs (Myles). Menopause is defined by the world health organization and the stages of reproductive aging workshop working group, "as the permanent cessation of menstrual periods that occurs naturally or is induced by surgery, chemotherapy, or radiation".

The age of menopause ranges between 45-55 yrs average being 50 yrs. The word "menopause" literally means the "end of monthly cycles" (the end of monthly periods or menstruation) when the endocrine and other changes begin, and to the 5-15 yrs after the menopause when menopausal symptoms are most acute.

According to, National institute of aging 2012 Many women go through the menopausal transition with few or no symptoms, wholesome have significant or disabling symptoms.. For most women, there's no cause for alarm or medical intervention. 80 percent of women said they were irritable, fatigued, and had feelings of despair during the menopausal phase of their lives.

About 40 billion people in India and m0re than 60% in Chennai were affected by menopausal symptoms. The stages of the menopause have been classified in to pre menopause, peri menopause, menopause and post menopause. The term " post menopause" applies to the whole of the women life after the menopause, extending in to old age when the pathological changes due to loss of ovarian function may become manifested. Menopausal symptoms are treated by hormonal and non hormonal therapies. The most commonly used hormonal therapies are progesterone, estrogen, combined progesterone therapy. The non hormonal treatments include nutritional diet like soya beans, green leafs and supplementary calcium and vitamins (D.c.Dutta, 2009)

The global scenario is now changing towards the use of non toxic plant products having traditional medicinal use. For the last few years there has been an increasing trend and awareness in to use supplementation foods.

Soya is a naturally, easily available anywhere and it is found to be safe to use. Isoflavone is important active compound of soya it has medicinal properties that will treat the menopausal symptoms. Soya milk is a supplement to the menopausal women. There are many different isoflavones found in plants. The isoflavones with the most estrogen like actions are daidzein, genistein formononetin and biochanin. They are found in differing amounts in various legumes. Soya milk contains Isoflavones (genistein, daidzein, and glycitein) are bioactive compounds with mildly estrogenic properties and often referred to as phyto estrogen that relieve the menopausal symptoms.

The dietary supplements like soya beans, helps in reducing menopausal symptoms like hot flushes, insomnia etc... Researchers said 'Eating soya foods, or using supplements derived from whole soya beans, may work better for women.

1.1 Need for the study:

Awareness is infinite treasure.....trace it, try it, trust it

As our population ages, the number of postmenopausal women grows. It is estimated that in 1998, there were over 477 million postmenopausal women in the world. That number is projected to rise to 1.1 billion by the year 2025. 60% of women in Chennai were affected by these menopausal symptoms that affect daily quality of life.

In the developed world, mean life expectancy for women since 1990 has increased from 50 to 81 years.. Today, there are over 200 million postmenopausal women worldwide and 40 million in India. According to the World Health Organization they estimated that by 2025 there will be 1.1 billion women above the age of 50 years experiencing menopause and the average age of experiencing the symptoms of menopause is 47.5years.

National family health survey - 2 (NFHS) analyzed the issue of menopause as an emerging issue in India in 2005. They assessed the variation in the level of menopause in India and its states. The variation with respect to different socioeconomic, demographic nutritional and reproductive related variables implied that the large number of women from poor socioeconomic status reached menopause early compared with their counterparts. As India is still characterized by a large number of illiterate women getting married at an early age with poor nutritional levels, the problems of early menopause may continue to be a burden in the future too.

The most common symptoms are: Hot Flushes, Night Sweats, Irregular Periods, Loss of Libido, and Vaginal Dryness, Anxieties, difficulty in

concentrating, overreacting to minor upsets, quickly being irritated, forgetfulness and mood swings, insomnia or disturbed sleep may also be experienced. There is evidence that estrogen loss plays a role.

Hormone replacement therapy is being considered as the treatment approach to relieve menopausal problems, becoming the most common risk factor for some of the disease like breast cancer, uterine cancer, ovarian cancer, colorectal cancer, venous thrombosis, and dementia including Alzheimer's disease. There was a positive correlation between knowledge of menopause and its remedial measures. soyabean is commonly called wonder bean since it is an excellent source of nutrients such as fats , proteins, carbohydrates, vitamins and minerals. It contains 19.5gms of fat, 21 gm of carbohydrates and provides 432 kcal per 100gm soyabean also contains a family of hemial compounds called phyto estrogens..Eating 100 gm of soya protein per day provides 200mg of soya isoflavones. A target range of 80-160 mg of isoflavones per day is needed for adequate relief of menopausal symptoms.

Lakshmi Narayanabairy, Shaliny Adega,(2009) conducted a study that in the Indian menopause society research there are about 65 million Indian women over the age of 45 and estimated that in the year 2026 , the population in India will be approximately 1.4 billion, people over 60 years will be 173 million and the menopausal population will be 103 million. The average age of Indian menopausal women with symptom is 47.5 years. There is a need of natural approaches to relieve menopausal discomfort and soya is considered as "super food" for relieving menopausal symptoms.

Though researchers focus on menopausal symptoms they always forget that there is a need to concentrate on post menopausal women (one year after menopause)who also have symptoms but are omitted. The community health nurse should play major role to create awareness about menopause and various cost effective remedies to reduce the menopausal symptoms during her home visits.

1.2 Statement of the problem:

"A study to assess the effectiveness of soyamilk with honey consumption on reducing physical and physiologial symptoms among the post menopausal women with in age group 40-60yrs at Choolai, chennai".

1.3 Objectives of the study:

- To assess the pre test level of menopausal symptoms among postmenopausal women in experimental group and control group.
- To assess the post test level of menopausal symptoms among postmenopausal women in control group and experimental group.
- To evaluate the effectiveness of soya milk on menopausal symptoms among postmenopausal women in experimental group.
- To associate the menopausal symptoms among post menopausal women and their selected demographic variables.

1.4 Operational Definition:

Assess:

It refers to measuring the level of menopausal symptoms among post menopausal women.

Effctiveness

Statistical significant difference in menopausal symptoms before and after administration of soya milk among post menopausal women assessed by menopausal rating scale.

Soya Milk

It refers to milk extracted from soya which is a natural food containing phytoestrogens which replace isoflavones that acts as estrogens in the body. supplementation of 100 ml prepared milk of soya (containing is flavones 120 mg energy 34.4kcal, total fat 3.2 g including omega 3-.11g, omega 6-.56g fiber1g, protein 3.2g)

Soya Milk with Honey:

5ml of Honey is added with soyamilk to enhance taste and flavor. Honey is good for health that helps to prevent pre hypertensive factors like palpitation, anxiety etc.

Post Menopausal Women

Refers to women aged about 40-60 years with transition time after menopausa whch has gone through 12 consecutive months without a menstrual period.

Physical and pysological Symptoms

It refers to, Physical symptoms like sweating, insomnia physiological symptoms like cardiac complaints, urinary complaints, joints and muscle complaints, experienced by post menopausal women which is measured through menopausal rating scale.

1.5 Assumptions:

The researcher assumes that

- Menopausal symptoms differ from each woman as it is normal sequence of ageing process.
- Consumption of soyamilk reduces the menopausal symptoms among the post menopausal women.

- Reduction of menopausal symptoms may improve the quality of life of post menopausal women.

1.6 Hypotheses

H1:

There is a significant effect in the reduction of level of physicsl and physiological symptoms among the post menopausal women after soya milk with honey consumption .

H2:

There is a significant association between the reduction level of menopausal symptoms among postmenopausal women and their selected demographic variables.

1.7 Delimitations

The study was

- Delimited to only post menopausal women with symptoms
- Conducted only for a period of four weeks.
- The study was delimited with in Choolai premises only.

CHAPTER II

2.1 REVIEW LITERATURE

The task of reviewing literature involves the identification, location, selection, analysis and written description of information on the topic of interest. This chapter deals with a review of published and unpublished Research studies and from related material for the present study. This helps the Investigator in building the basement of the study.

The review of literature for the study is presented under the following heading,

2.1 Literature related to prevalence of menopausal symptoms

2.2 Literature related to health benefits of soya bean consumption

2.3 Literature related to effectiveness of soya milk upon menopausal symptoms

2.1 Literature related to prevalence of menopausal symptoms

Cheng, Peng-Fei et al ,(2015) conducted a descriptive study to measure the association between selected factors and menopausal problems among 90 working women aged between 45-56 at Erode district. A self administered questionnaire was used to collect the data and data were analyzed by using descriptive and inferential statistics. The problems assessed were vasomotor changes, physiological body changes and sexual changes. The major findings suggested were there was a significant relationship between level of

menopausal problems and age of the women ($\chi 2=8.80$; $P<0.01$), and the duration of menopause. s

Nitin joseph et al. (2014) conducted a cross sectional study; the Mean age of the participants were 54.2 ± 7.2 years. Most of the participants were postmenopausal women 80 (72.7%) followed by perimenopausal 17 (15.5%) and premenopausal women 13 (11.8%). There was no significant correlation between the number of menopausal symptoms with age ($r = 0.05$, $P = 0.623$), However a significant association was found between the number of menopausal symptoms and educational status of participants with the mean number of symptoms increasing with increasing educational status ($F = 2.218$, $P = 0.047$).

Akanksha Singhet al. (2013) conducted a cross-sectional study to assess Menopausal symptoms of postmenopausal women in a rural community of Delhi, India. In this study by using self-designed, semi structured, interview based, oral questionnaire to determine the mean age at attaining menopause and the prevalence of various self-reported menopausal symptoms complained by 252 postmenopausal women (40-54 years). The result of the study was, the mean age at attaining menopause was 46.24 (postmenopausal women experienced at least one or more menopausal symptom(s).It was concluded that it is necessary to critically introspect health needs of postmenopausal women and specific components can be incorporated in the national health programs.

Mathews (2013) conducted descriptive study to assess of post menopausal symptoms among women attending various outreach clinics in South Canara District of India. This study was hence done to assess the pattern and severity of menopausal symptoms and to find out the factors associated with these symptoms for women's in the age group of 40-65 years selected by convenient sampling method. Data regarding menopausal symptom was obtained by interviewing each participant using the menopause rating scale questionnaire. The result of the study was**:** Mean ages of the participants were

54.2 ± 7.2 years and mean age of attainment of menopause was 48.4 ± 4.5 years.. Commonest symptom reported was joint and muscular discomfort and physical and mental exhaustion seen in 94 (85.4%) participants. It was concluded that more of menopausal clinics are needed for awareness generation, early recognition and treatment of related morbidities.

Rahman et al. (2010) conducted a descriptive study to assess the menopausal symptoms using modified menopause rating scale (MRS) among middle age women in sarawale. In this study by using modified MRS questionnaire, 356 The result of study was the mean age of menopause was 51.3 years (range 47-56 years). The most prevalent symptoms reported were joint and muscular discomfort (80.1%), physical and mental exhaustion (67.1%) and sleeping problems (52.2%). Followed by symptoms of hot flushes and sweating (41.6%), irritability (37.9%), dryness of vagina (37.6%), anxiety (36.58%), and depressive mood (32.6%).. It was concluded that the prevalence of menopausal symptoms using modified MRS in this study correspond to other studies on Asian women.

Mariane et al. (2010) conducted study on quality life of menopausal women Sixty-two women aged 44-55 referring to and academic outpatient clinic in Shiraz were selected by simple random sampling, and allocated in two groups. Data was collected using a modified Hildich questionnaire on quality-of-life in menopause stage. Quality-of-life of the subjects (vasomotor, psychosocial, physical and sexual aspects) were evaluated prior to and 3 months after educational intervention. Results:. The study group showed a significant improvement in their quality-of-life (p= 0.001).

Keenan et al. (2010) conducted a cross sectional phone survey to assess severity of menopausal symptoms and use of both conventional and complementary therapies. In this study 2,602 women aged 45 years or older were selected, the participants were asked a series of questions about their menopausal states, menopausal symptoms, healthcare provider selection and

therapies used for menopausal symptoms, the highest prevalence estimates were reported for hot flashes (62.9%), night sweats (48.3%) and trouble sleeping (41.1%). The researcher concluded that. 46% of women used complementary / alternative therapies either alone or in combination with conventional therapies, whereas a one third of the women did not use any therapy in relation to menopause.

Liee Kar (2009) conducted the prevalence of menopausal symptoms the mean age of menopause was 51.3 years (range 47 - 56years). The most prevalent symptoms reported were joint and muscular discomfort (80.1%); physical and mental exhaustion (67.1%); and sleeping problems (52.2%) Followed by symptoms of hot flushes and sweating (41.6%); irritability (37.9%); dryness of vagina (37.9%); anxiety (36.5%); depressive mood (32.6%). Other complaints noted were sexual problems (30.9%); bladder problem (13.8%) and heart discomfort (18.3%). postmenopausal (n=133) women. However uro genital symptoms mostly occur in the postmenopausal group of women.

Gharaibeh et al. (2009) conducted descriptive study to assess the severity of menopausal symptoms of Jordanian women. Cross-sectional design was used. Data were collected from 350 Jordanian women using a self administered questionnaire consisting of socio demographic, medical and obstetrical history and the Greene climacteric scale. The result 0f the study on the severity of menopausal symptoms showed that 15.7%, 66.9% and 17.4% were experiencing severe, moderate and mild menopausal symptoms, respectively. Vasomotor signs were reported to have the highest scores of severity as manifested by hot flushes and night sweating.

Peeyananjarassri K et al. (2009) conducted a cross-sectional study to evaluate menopausal symptoms and quality of life in middle-aged women. The data collected from 270 women aged between 45-65 years who attended the menopause and gynecological clinic, by using the Menopause quality of life

questionnaire as the tool. The results stated that the mean age at menopause of the postmenopausal women was 48.7 years. The prevalence of the menopausal symptoms like night sweats, hot flashes and vaginal dryness among the women aged 45-65 years were 20.8%, 36.8% and 55.3% respectively. The researcher concluded that perimenopausal and postmenopausal women had a significant decrease in quality of life compared to premenopausal women.

ManinderKaur and InduTalwar (2009) Anthropologist, the study was attempting to estimate age at natural menopause among rural and urban Punjabi Brahmin females of Roop Nagar district (Punjab). Cross-sectional data are based on 870 Brahmin females (rural=450, urban=420), ranging in age from 40 to 70 years. Mean and median age at menopause of rural females is 48.22+2.47 years and 48.98+1.12 years respectively, while among urban females it is 49.30+2.80 years and 50.12+1.15 years. The researcher concluded that females between the age group 40-55 must be concentrated as they experience more symptoms.

Nisar et al. (2008) conducted study at outpatient department of Isra University, Total 863 women of age 42 to 80 years were interviewed in outpatient department. A semi structured questionnaire was used to collect data. (78.79%) women considered menopause as a natural process, these women were of age 45 to 58 years and (59.4%) were uneducated. Frequently reported symptoms were Backache in (75.66%), body aches, 576(66.74%) and Insomnia in (63.44%) women. Vasomotor symptoms were reported by (59.4%) and 390 (45.19%) respectively. 318 (36.84%) women were bothered by menopausal symptoms but only (31.86%) has consulted doctor. 649 (75.20%) women were not taking any medicine for symptoms, 08 (0.926%) were taking Herbs, 10 (1.15%) were on HRT.

Aaron And Mulliyil (2002) conducted a cross sectional studies on medico social dimensions of menopausal women in India 100 menopausal and 100 premenopausal women were selected. The study findings showed 69% of

the women in menopause complained of diminishing abilities, 23% felt sexual life ends with the onset of menopause, 63% reported that their husband had become disinterested in them after menopause and 11% were apprehensive of loss of feminity.

Kronenberg (200) performed A recent review of a number of studies using alternative methods for menopause symptoms. Twelve studies using soy or soy extracts were evaluated. Soy appeared to have a 'modest' benefit in reducing hot flashes. Soy based foods seemed to be more effective than traditional isoflavone supplement preparations. The authors comment that 'foods that contain phytoestrogens show promise for the treatment of menopause symptoms'.

2.2 Literature related to health benefits of soya bean consumption:

Aedin Cassidy et al. (2013) conducted a controlled double-blind randomised controlled trials (RCT on healthy post-menopausal women. For emerging areas all available human studies in post-menopausal women were reviewed. In order to make cross comparisons between studies the doses of isoflavones were calculated as aglycone equivalents. There is a suggestion, but no conclusive evidence, that isoflavones from the sources studied so far have a beneficial effect on bone health. The consumption of whole-soyabean foods and soyabean-protein isolates has some beneficial effects on lipid markers of cardiovascular risk.

Khalid Zaheer (2013) conducted a descriptive study to review current research on the effects of soy consumption on menopausal symptoms. Isoflavones were hailed as magical natural component that attribute to prevent some major prevailing health concerns, Consumption of soy products have been linked to reduction in incidence or severity of chronic diseases such as cardiovascular, breast and prostate cancers, menopausal

symptoms, bone loss etc. Overall, consuming moderate amounts of traditionally prepared and minimally processed soy foods may offer modest health benefits while minimizing potential for any adverse health effects.

Katoh R et al. (2010) conducted a meta-analysis of randomized controlled trials study to evaluate the effectiveness of Soy isoflavone intake increases bone mineral density in the spine of menopausal women. Ten studies with a total of 608 subjects were selected for meta-analysis. The spine bone mineral density in subjects who consumed isoflavones increased significantly by 20.6 mg/cm (2) in comparison to that in subjects who did not consume isoflavones.. Increases in the spine bone mineral density with isoflavone intake of more than 90 mg/day and with treatment lasting 6 months were 28.5mg/cm(2) and 27 mg/cm(2) respectively. It is concluded that soy isoflavone consumption for 6 months can be enough to exert beneficial effects on bone in menopausal women.

Carmignani, LO et al. (2009) a randomized controlled trial study to assess the effect of dietary soy supplementation compared to estrogen and placebo on menopausal symptoms. Sixty healthy, symptomatic, postmenopausal women of 40-60 years of age were allocated to use dietary soy supplementation (containing 90 mg of isoflavone). Main outcome measures: the Menopause Rating Scale (MRS) was used to assess menopausal symptoms at baseline and after 16 weeks of treatment. Comparison between groups revealed a statistically significant improvement in somatic symptoms (hot flashes and muscle pain) in the users of HT (-45.6%) and dietary soy supplementation (-49.8%). Urogenital symptoms (vaginal dryness) improved significantly in HT users (-38.6%) and in users of the dietary soy supplementation (-31.2%).A study concluded that Dietary soy supplementation may constitute an effective alternative therapy for somatic and urogenital symptoms of the menopause.

Kavitha (2010) conducted a experimental study in Chennai and found that the mean, standard deviation of menopausal symptoms in control group were same before and after administration of soya (M=30.96, SD=7.950),were as in experimental

group the mean and standard deviation were (M=9.93, SD=6.99) in comparison with before administration of soya (M=31.5, SD=8.12) The difference was found statistically significant at P<0.001 level of confidence and it can be attributed to the effectiveness of administration of soya.

Aparna (2010) conducted a survey to review current research on the effects of soy consumption on menopausal symptoms. The methods used were meta-analysis and individual clinical trials. The survey reported that isoflavone supplementation was associated with a 34% reduction in hot flashes, with increased efficacy as the baseline number of flashes .This study concluded that consumption of 30 mg/day of soy isoflavones (or at least 15 mg genistein) reduces hot flashes by up to 50 %. The greatest benefit may be realized when the isoflavone-rich food or supplement taken in divided doses by subjects who experience at least four, hot flashes/day.

SyedaBatoolMazhar and SabeenaRasheed (2008) the study was conducted to determine the value of Menopause Rating Scale (MRS) in assessing Postmenopausal women. Fifty women fulfilling the study criteria were interviewed. The most commonly reported symptoms were hot flushes (90%) and sleep disturbances (89%) followed by palpitations (42%). Sexual problems (18%) and bladder symptoms (12%) were reported least frequently. It was concluded that Menopause rating scale was easily and rapidly administered comprehensive tool for assessing symptoms of climacteric women.

Kuzer (2008) conducted the study to review current research on the effects of soy consumption on menopausal symptoms. Researcher concluded that

consumption of 30mg/day of soy isoflavones reduced hot flashes by up to 50%. This total reduction includes that provided by “the placebo effect”. It was concluded that the greatest benefit may be realized when the isoflavone rich food or supplement is taken, the subjects experience reduced symptoms of at least four hot flashes /day. (, p=0.001)

Kyung k.soares, Mm.j.Haider (2002) conducted a randomized double blinded study in Brazil was conducted among 80 women between 45-55 years, to assess the effectiveness of soy isoflavone. The subjects were subject to the therapy and re-examined for 4 months. The statistical analysis showed that a decrease n menopausal symptoms after 4 months <p=0.01 between the base line and the isoflavone group p<0.01 between placebo and isoflavone and group. This study also showed that there was a decrease in low density lipoproteins which suggest a positive effect on cardiac diseases.

Ferrari A (2008). conducted a study to investigate the efficacy of soy isoflavone on climacteric symptoms in postmenopausal women. In this study, a total of 80 women with mean age 55.1 years, who reported 5 or more hot flush episodes per day, were randomized to receive either 250 mg of standardized soy extract (Glycine max AT) a total of 100mg/day of isoflavone. For 10-months, climacteric symptoms were evaluated using a score card and the menopausal Kupperman index. After 10 months, there was a significant reduction in frequency of hot flushes among isoflavone users when compared to those on placebo (p<0.001).Soy isoflavone was significantly superior to placebo, in reducing hot flush severity (69.9%, (p<0.001). The study concluded that the soy isoflavone extract exerted favorable effects on vasomotor symptoms and good compliance, providing a safe and effective alternative therapeutic for postmenopausal women.

Coplin.S (2000) states that soya bean is commonly called wonder bean since excellent source of nutrients such as proteins, fats, carbohydrates, vitamins, and minerals. It contains 43 grams of protein per 100 grams which is

highest among pulses. It contains 19.5 grams of fat, 21 grams of carbohydrate and 432 k.cal per 100 gm. 100gms of soya gives 200 mg of isoflavones that helps in reducing post menopausal symptoms.

2.3 Literature Related To Effectiveness of Soya Milk

Mansoreh Nourozi, et al. (2015) performed as a randomized clinical trial among 264 postmenopausal women aged between 45 and 60 in the Vali-e-asr Reproductive Research Center, the Endocrine and Metabolism Research Center and the Women Research Center at Alzahra University,The probability of this risk in women with severe hot flashes is 3.58 against women with low to moderate hot flashes. Therefore, effective and safe treatment that reduces the symptoms can improve the quality of life

Maya.c.koshy (2012) conducted a study to assess the effectiveness of soya bean on menopausal symptoms among 60 post menopause women's in Salem district. Samples were selected by purposive sampling and data was collected using modified Greene climacteric scale. The mean post test menopausal problem 4.37 was less than the mean pre test 24.93.the obtained "t" value=32.833, ($p<0.05$) was highly significant. It is concluded that significant reduction in the mean menopausal problem after soya bean administration.

Hachul et al. (2011) conducted a study to assess the effectiveness of soybean on reducing post menopause insomnia. Two groups of postmenopausal women with insomnia participated in the study: the first received 80 mg isoflavones daily for 4 months, Thirty-eight women were enrolled in the study. Polysomnography revealed a significant increase in sleep efficiency in the isoflavone group (from 77.9% to 83.9%) when compared with the placebo group (from 77.6% to 81.2%). Is flavones induced a decrease in the intensity and number of hot flashes and the frequency of insomnia: The studies

concluded that isoflavone treatment was effective (<p=0.03) in reducing insomnia symptoms, which was confirmed by increased sleep efficiency as observed by polysomnographic analysis.

Manubakiam (2010) an experimental study was conducted to assess the effectiveness of soya bean upon menopausal symptoms among 60 menopausal women in the age group of 45 – 56years. Soya bean was administered 50 g once daily for 30 days. That revealed that post test mean 11.5 was lesser than pre test mean 14.5 in experimental group. The obtained't' value 7.761 was highly significant at 0.05 level. Soya bean consumption was effective (<p=0.01) on menopausal symptoms among women between 45-56 years. Hence it was concluded that soya consumption was effective.

Charlotte Atkinson et al. (2010) conducted a double-blind, randomized, placebo-controlled trial to determine the effects of phytoestrogen isoflavones on bone density in women. 205 women's (49-65 yrs) were enrolled in this study. Red clover-derived isoflavone supplement that provided a daily dose of 26 mg biochanin A, 16 mg formononetin, 1 mg genistein, and 0.5 mg daidzein for 1 year bone formation markers were significantly increased in the intervention group compared with placebo in postmenopausal women. It was concluded that isoflavones have a potentially protective effect on the lumbar spine in women.

P jagadeesh Rao (2010) conducted a scientific study w to investigate the influence of soya isoflavones on menopausal symptoms among postmenopausal women. One hundred and four postmenopausal women examined the consumption of 60 grams of isolated soy protein with 60 grams of the common milk protein (casein) per day for 8 weeks. Women recorded the severity of hot flash daily in menopause dairy. After fourth week of treatment, identified as the soy bean, which can reduce the frequency and intensity of hot flushes by 45% among postmenopausal women, which was significantly different from the milk protein group. The study finding revealed that

phytoestrogens for their role in diminishing menopausal symptoms related to estrogen deficiency.

Cheng G et.al. (2010) conducted the double-blind prospective study by Nutrition institute Sweden to evaluate the effects of isoflavone treatment in postmenopausal women. Sixty healthy postmenopausal women were randomly assigned by computer into two groups to receive 60 mg isoflavones or placebo daily for 3 months. Before and after treatment, climacteric symptoms were recorded; In women receiving 60 mg isoflavones daily, hot flashes and night sweats were reduced by 57% and 43%,($p=0.001$) respectively. The study concluded that short-term prospective study implies that isoflavones could be used to relieve acute menopausal symptoms.

K. Geeta et al. (2010) this was a purposive randomized intervention trial which assessed the occurrence of postmenopausal symptoms problems and effectiveness of soy protein isolate and calcium supplementation on overcoming these symptoms in 100 postmenopausal subjects. Somatic complaints were reported by 49.43% to 70.78% of the women and were significantly ($p<0.05$) more prevalent than psychological complaints (17.97% to 98.87%) and uro genital problems. Majority of the subjects (83.14%) had moderate degree of problems. Soy protein isolate intervention was effective in reducing most of the somatic problems in 8.00% to 58.82% of the subjects. Maximum improvement was reported on flushes, heart problems and sleep disturbances.. Thus, dietary interventions in the form of soy protein isolate and calcium help in decreasing postmenopausal problems.

Anne Lethaby et al. (2013)conducted the double blind, randomized place to controlled study to find effectiveness of soy in receiving vasomotor symptom in postmenopausal women. This study carried out with 177 post-menopausal women, with mean age of 55 years. The test was double blind and before the test the postmenopausal women daily five or more not flushes, the most important menopausal symptom. After 2 weeks a decreases in the group

(40%) who took isoflavones was noticed. It was concluded that soy isoflavones was effective (p=0.03) in reducing frequency and severity of flushes but did not stimulate the endometrium in menopausal women.

Petri Nahas E et al. (2010) conducted a prospective, double-blind and placebo-controlled study to evaluate the effects of isoflavones on vasomotor symptoms 50 postmenopausal women randomly divided into two groups: 25 women on soy germ isoflavones (60 mg per day, capsules) and 25 women on placebo. The isoflavone group showed increased estradiol levels with unchanged FSH, LH, and vaginal cytology, and a reduction of 11.8% in LDL and an increase of 27.3% in HDL .It was concluded that Soy gram isoflavone shows exerted favorable effects(p=0.05) on vasomotor symptoms and lipid profile, showing itself to be an interesting alternative therapy for the postmenopausal women.

Ishiwata N et al. (2009) conducted a randomized double blind placebo control trial study on soya bean supplement for relieving menopausal symptoms. 134 Japanese women age between 40-59 years. Mood states questionnaire was used to collect the data for 12 weeks. Placebo (n=4) 10mg of equal per / day (Eq: 1 n = 44) and 10mg of equal three times per day (Eq: 3 n=46). Habitual isoflavones intake was limited to 20mg/dl. The result of the study was compared with placebo, the EQ-3 group showed significant decreases in depression scores ($P < 0.05$), as well as significant decreases in Tension-Anxiety ($P < 0.05$), Depression-Dejection ($P < 0.05$) and Fatigue ($P < 0.01$) and increases in Vigor ($P < 0.05$) of the Profile of Mood States, hot flushes. The study concluded that Soya supplement improved mood-related symptoms in perimenopausal/postmenopausal equal non producers.

Albertazzi et al. (2009)conducted a randomized, double-blind, placebo-controlled trial to assess the effect of daily dietary supplementation of soy protein isolate powder on hot flashes in postmenopausal women.46 Age in the treatment group (n=51) was 48-61 years, while in the control group (n=53) it

ranged from 45-62 years. The diets of the 104 women were supplemented with either 60 g soy powder (40 g isolated soy protein) or 60 g placebo (casein) daily for 12 weeks. By the end of the 12th week, women taking the soy protein isolate had a 45% reduction in daily hot flashes compared to a 30% reduction obtained with the placebo. It was concluded that Soy protein isolate added daily to the diet substantially reduced the frequency of hot flushes in climacteric women

. **Soundari (2009**) conducted a comparative study among 40 menopausal women, the effectiveness of soya bean versus diaphragmatic breathing exercise. Mean difference between pre and post test menopausal problem score in experimental group I and experimental group II was 2.95, t =6.210. (0.001) was highly significant. There was significant relief in menopausal problem among working women in soya group than diaphragmatic breathing group.

Professor Melby (2009) examined the impact of isoflavones – the chemicals found in soya that produce an effect similar to estrogen. She said that ingesting at least 54mg of soya is flavones daily for six weeks to a year reduces the frequency of hot flushes by 20.6 per cent and severity by 26 per cent. Each gram of soya protein in soya beans and traditional soya foods provides approximately 3.5mg of isoflavones. Two glasses of soya milk provide approximately 50mg of isoflavones.

Francine k.Welty et al. (2009) conducted an epidemiological study to examine the effect of soy nuts on hot flashes and menopausal symptoms. Sixty healthy postmenopausal women were randomized in a crossover design to a therapeutic lifestyle changes diet alone and a TLC diet of similar energy, fat, and protein content in which one-half cup soy nuts divided into three or four portions spaced throughout the day replaced 25 g of nonsoy protein. The result of the study was 19% decrease in vasomotor score), 12.9% reduction in psychosocial score), 9.7% decrease in physical score, and a trend toward improvement in the sexual score, with a 17.7% reduction in symptoms. The

study was concluded that substituting soy nuts for nonsoy protein in a TLC diet and consumed three or four times throughout the day is associated with a decrease in hot flashes and in reducing menopausal symptoms.

Borchers (2008) conducted study to find effectiveness of soy isoflavones modulate immune function in healthy post menopausal women. Post menopausal women aged 50-65 year enrolled in this 16 weeks double blind, placebo controlled trial were randomly assigned to 1 of 3 experimental group: 1) control, 706ml cow milk/day plus a placebo supplement 2) Soy milk, 71.6mg isoflavones derived from 706ml soy milk/day plus a placebo supplement 3) Supplement, 70mg isoflavones in a supplement plus 706 ml cow milk/day. Plasma and 24 hrs urine sample were obtained at baseline and at 16 weeks. The researcher concluded that soy milk and supplemental isoflavone modulate.

Khaodhiar et al. (2008) conducted study among 147 post menopausal women given daily supplements of the diadze in rich isoflavon eaglycone supplement at a dose of 40 or 60mg for 12 weeks. At the end of the study, the researcher report that the number of hot flashes in the group receiving the lower dose was reduced by 52%, while the women receiving the higher dose experienced 51% reduction of in number of hot flushes. The placebo group reported as 39% reduction in hot flush frequently. The study concluded that supplements of diadzein rich isoflavone has reduced hot flushes among post menopausal women's (<p=0.04).

G Radhakrishnan et al. (2008) conducted a double blind, placebo controlled trial study to examine effects of 6 months supplementation of isoflavone rich soy protein on symptoms, lipid profiles and bone density in postmenopausal women. 100 healthy postmenopausal women, not taking Hormone Replacement Therapy, were randomly assigned to consume either 25gm soy protein isolate containing 75 mg isoflavones (study group) or 25 gm casein protein (control group) daily. Significantly higher number of cases

reported improvement in hot-flashes, joint-pains and vaginal-dryness on soy treatment ($p<.05$). Soy group showed 7.7% decrease in total cholesterol and 14% decrease in LDL-cholesterol(significantly different from control group $p<.05$) while no effect was seen on HDL cholesterol, Blood pressure, sex hormones, vaginal cytology, uterine endometrium & bone densitometry. It is concluded that 25gm soy supplement containing 75mg of isoflavones may be an effective alternative therapy for menopausal symptoms and may offer a benefit to cardiovascular-system by altering lipid-profile favorably.

Lakshmi k.s, (2010) conducted a study in selected villages of Coimbatore district, Tamilnadu to assess the effectiveness of soya bean consumption on menopausal symptoms among women between 45-5 years. The study results reveal that post-assessment mean 11.5 was lesser than preassessment mean 14.5in experimental group. The obtained‘t’ value 7.761 was highly significant at 0.05 level. The investigator concluded that soya milk consumption was effective on menopausal symptoms.

Jeinkins (2007) conducted an experimental study by twenty-five hyperlipidemic men and women took soy (providing 36 g/d soy protein and 168 mg/disoflavones) and control breakfast cereals, each for 3 weeks in a randomized cross over study with a 2-week washout period between treatments. Fasting blood samples were obtained pretreatment and at weeks 2 and 3 of each treatment. However, oxidized low-density lipoprotein (LDL) was reduced on the test compared with the control both as total dienes in LDL. Consumption of soy protein may reduce the risk of cardiovascular disease both through reduction in serum lipids and by the antioxidant properties of protein-associated soy isoflavones.

Misra et al. (2003) conducted a randomized clinical trial to evaluate the efficacy of herbo mineral on menopausal syndrome. Postmenopausal syndrome is characterized by manifestations of hot flushes, insomnia, night sweating, irritability and mood swings and anxiety-depression. M-3119, a

herbo mineral preparation administered to 42 women with signs and symptoms of postmenopausal syndrome at a dose of 2 tablets twice daily for 6 months, cured the symptoms in 53% of women, improved in 31% and remaining 16% did not respond to the therapy. From the various parameters taken for clinical analysis, it may be concluded that M-3119 would be an effective therapy for the control of symptoms of menopausal syndrome.

Somekawa (2007) conducted study to investigate the influence of soy isoflavones on menopausal symptoms, bone mineral density in post menopausal women. In total 478 postmenopausal women were involved in the study. After selection, they were divided in four groups depending on quantity of daily isoflavones consumption... The women had menopause symptoms at the time of enrolment such as hot flushes, sweating, chills, sleep problems, irritability depression, headaches, palpitations and backache. The average (mean) daily intake of soy isoflavones was 54.3mg. The study concluded that high consumption of soy isoflavones is associated with increased bone density in postmenopausal women (p=.02). Consumption of soy isoflavones might be useful to prevent symptoms related with low estrogen levels.

Shah & Agarwal (2006) in a public hospital in India conduced a prospective, randomized, double blind, placebo- controlled trial to evaluate the effects of a herbo mineral phytoestrogen formulation [drug A] containing soy isoflavones in 60 peri and post menopausal women with menopausal symptoms .women with symptoms related to menopause were randomized and assigned to either group A or group B (placebo).. The group that received the active drug showed 40% of improvement in psychological symptoms as compared to the placebo group. This group also reported an overall sense of well being as compared to the placebo group.

Malhotra (2004) described that isoflavones are plant compounds that are structurally and functionally similar to 17 -oestradial and bind to oestradial receptors despite relatively weak estrogen receptors binding potencies,

isoflavone have bioactivity similar to that of oestradial and reach concentration sufficient to elicit response in the human body.

Albertazzi, et al. (2003) conducted a randomized, double-blind, placebo-controlled trial was conducted to assess the effect of daily dietary supplementation of soy protein isolate powder on hot flashes in postmenopausal women. Age in the treatment group was 48-61 years, while in the control group it ranged from 45-62 years. The diets of the 104women were supplemented with either 60 g soy powder (40g isolated soy protein) or 60 g placebo (casein) daily for 12 weeks. By the end of the 12th week, women taking the soy protein isolate had a 45-percent reduction in daily hot flashes compared to a 30-percent reduction obtained with the placebo.

2.2 **Conceptual Framework**

. The present study is aimed at assessing the effectiveness of soya milk upon reduction of menopausal symptoms among menopausal women at selected areas at Chennai. The conceptual framework of the study was Weidenbach's Helping art theory.

This Theory Has 3 Factors

1) Central purpose

2) Prescription

3) Realities

1) **Central purpose**

It refers to what the nurse wants to accomplish. It is the overall goal towards which a nurse strives.

2) Prescription

It refers to the plan of care for clients. It will specify the nature of action that will fulfill the nurse's central purpose.

3) Realities

It refers to the physical, physiological, emotional and spiritual factors that come into play in situation involving nursing action. The five realities identified by wiedenbach's are agent, recipient, goal, means and framework.

The conceptual framework of the nursing practice according to this theory consists of three steps as followed:

Step I: Identifying the need for help

Step II: Ministering the needed help

Step III: Validating that the need for help was met

Step-I: Identifying the need for help

This step involves determining the need for help. The menopausal women with menopausal symptoms are identified by screening with Modified Wiklund Menopausal Scale. The random sampling method by lottery metho is used to select the sample.

Pre Interventional level of menopausal symptoms is measured using combined demographic data and Modified Wiklund Menopausal scale.

Step-II: Administration of the needed help

After the pre assessment levels of menopausal symptoms are measured,

This refers to the provision of required help to fulfill the identified need. It has two components

- Prescription

❖ Realities

Prescription

In this study prescription refers to soyamilk administration.

Realities

Agent : Investigator

Recipient : Menopausal women (40 -60 years)

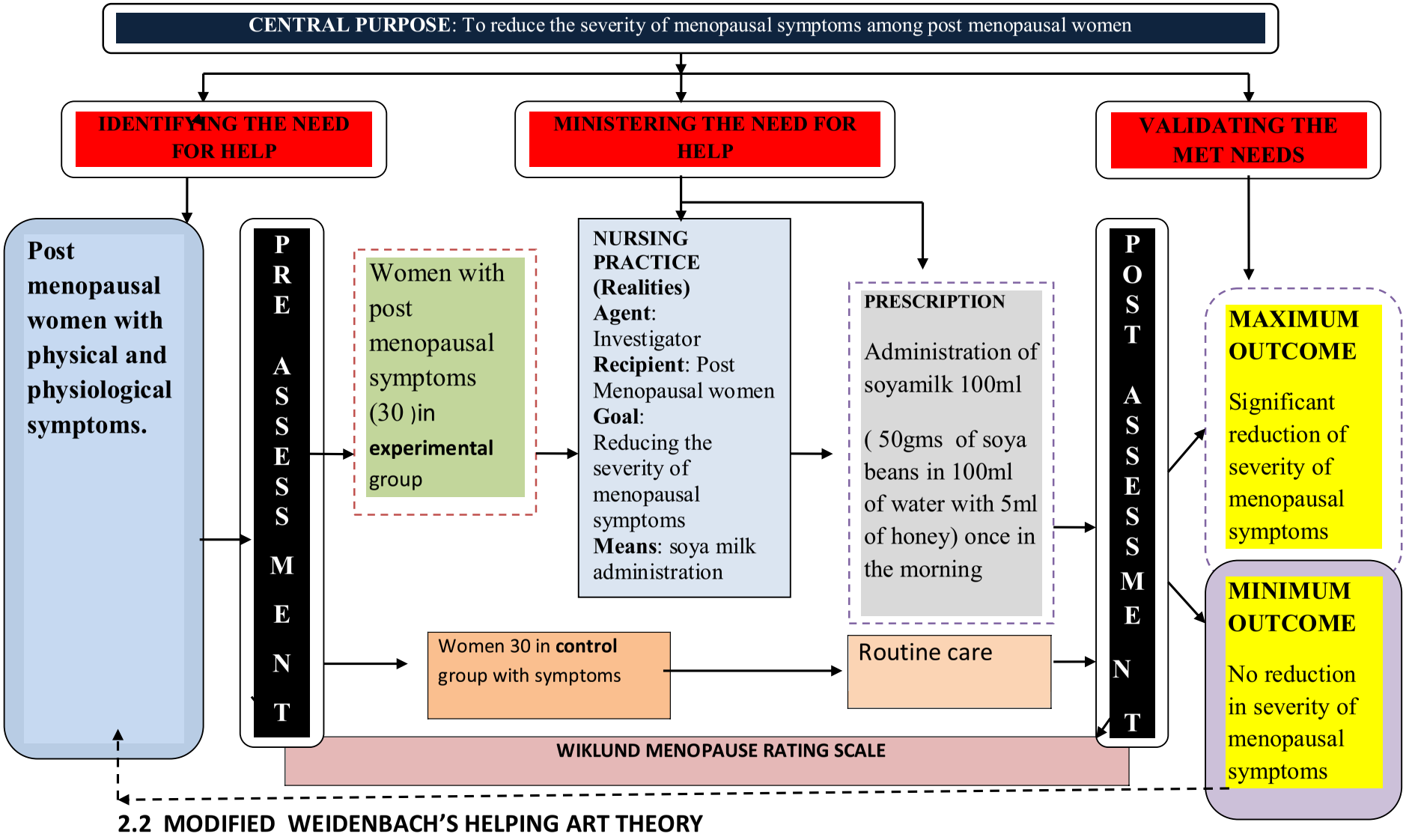
Goal : Reducing the postmenopausal menopausal , symptoms

Means **:** 100ml of Soya milk administration

Framework : Menopausal Women residing at selected urban area Choolai, Chennai-112

Step-III: Validation of the need for help was met

It is accomplished by means of measuring post assessment level of menopausal symptoms after soya milk administration. This was done by Modified Wiklund Menopausal Scale and identified whether there is a reduction of menopausal symptoms among women.



2.2 MODIFIED WEIDENBACH'S HELPING ART THEORY

CHAPTER III

RESEARCH METHODOLOGY

The methodology of research study is defined as the way the data are gathered in order to answer the question to analyze the research problem. The research methodology involves a systemic procedure by which the researcher starts from initial identification of the problem to its conclusion.

The present study conducted to assess the effectiveness of soya milk upon menopausal symptoms among menopausal women. The chapter deals in brief description of different steps undertaken by the researcher for the study. It involves research approach, the setting, population, sample and sampling technique, selection of the tool, content validity, reliability, pilot study, data collection procedure and plan for data analysis.

3.1 Research Approach

An experimental research is the most significant part of any research. The appropriate choice of the research approach depends upon the purpose of the research study which is under taken. The research approach used in this study is quantitative research approach.

. To accomplish the objective of this study an experimental approach is considered most appropriate; since the researcher wanted to assess the effectiveness of soya milk upon menopausal symptoms among menopausal women.

3.2 Data collection period:

The study was conducted for the period of four weeks

(July 16th to August 15th 2015).

3.3 Study setting

Study was conducted in selected urban areas of choolai. Choolai belongs to Chennai corporation which covers 10 zones..Choolai was the north zone and our adopted area belongs to 6^{th} zone.it has 16 streets and covers 58,744 population. Ckp street, v.v.koil steet, angalparameshwari street were sselected for experimental group and periyathambi street, t.k.mudhali street, arimuthu mesthri street were selected for control group.the setting selected was just 3 kms away from our college and selected based on the feasibility and availability.

3.4 Study Design

A research design is the overall plan for addressing a research question, including specification for enhancing the study integrity.

CR O1 ⟶ O2

ER O1 ⟶ X ⟶ O2

R - Randomization

O1- Pre assessment of menopausal symptoms

O2 - Post assessment of menopausal symptoms

X -Intervention (administration of soya milk)

E-Experimental group

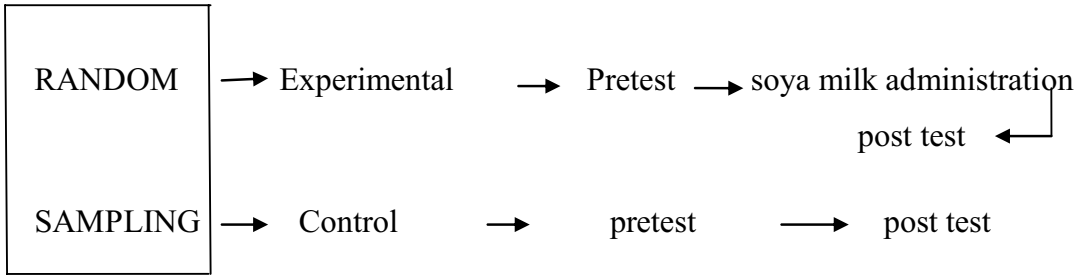
C-Control group.

An experimental research design was adopted for conducting this study. It fulfills the criteria such as manipulation, control, and randomization. Randomization was carried out to select the 60 sample and to assign the control

and experimental group. Soya milk was given as manipulation in experimental group.

In this study pretest, posttest control groupdesign was adopted. The researcher assessed the prevalence of menopausal symptoms among post menopausal women using rating scale on menopausal symptoms. Then control and experimental group were selected then manipulated the independent variable that is soya milk which was administered only to the experimental group. Then the menopausal symptoms were assessed by rating scale for both groups. Finally,

the effectiveness of soya milk upon menopausal symptoms assessed by using rating scale on level of satisfaction.



3.5 Study Population

The population of the present study comprised of 60 post menopausal women with in the age group of 40-60 years in areas of Choolai. Chennai.

Population

Population is the entire aggregation of cases which meet designated set of criteria. Choolai total population is around 58,744.

The target population is the group of population that the researcher aims to study and to whom the study finding will be generalized. In this study the target population for this study comprises of post menopausal women at selected urban community areas in Choolai.

Accessible population is the list of population that researcher finds in the study area. The accessible population in this study is post menopausal women 40-60 yrs with menopausal symptoms residing in Choolai.

3.6 Sample Size:

A sample size of 60post menopausal women between 40-60 yrs at selected urban community areas in choolai. 30 samples will be assigned for the experimental group and 30 for the control group. .

3.7 Sampling criterion:

The sample selected was based on the following inclusion and exclusion criteria.

3.7.1 Inclusion Criteria:

- Post menopausal women with menopausal symptoms.
- Study includes women age group 40-60 yrs.
- Patients who speak and understand, Tamil or English.
- Women who are all willing to participant in this study.

3.7.2 Exclusion criteria:

- Study excludes women allergic/intolerance to soya beans.
- clients who were not available during data collection
- Clients who are in hormonal therapy to reduce menopausal symptoms.

3.8 Sampling Technique

- Sampling techniques:-simple Random sampling method.

Simple random sampling technique was used by lottery method. The investigator conducted a survey in Choolai to identify the total

number of subjects with menopausal symptoms. In Choolai area 10 streets were surveyed and the total number of postmenopausal women were 264. women obtained from selected areas of Choolai. with menopausal symptoms was 174. Women who attained natural menopause is 255 and 9 were by surgery. The required 60 number of samples with menopausal symptoms each 30 for experimental and control group was selected as the sample.

3.9 Research variables:

An abstract concept when defined in term that can be measured is called a variable. Variables are characteristics that vary among the subject being studied.

Independent variable – Soya milk 100ml with 5 ml of honey/day for 2 weeks.

Dependent variable- perceived level of menopausal symptoms among post menopausal women.

3.10 Development & Description of the tools:

3.10.1 Development of tool:

A structured interview schedule was developed based on the objectives of the study. Various sources of literature and opinion from the Subject experts are obtained to ascertain the effectiveness and to bring out the correct items in the questionnaire. All these helped ultimately in developing the tool.

3.10.2 Description of the tool:

The instrument used in this study consists of two sections,

SECTION A- Demographic profie: - educational status, religion, occupation, income, marital status, type of the family, number of children of post menopausal women, it consists of 11 questions.

SECTION B- Wiklund Menopausal Symptom Scale. This consists of 10 menopausal symptoms scale in which the symptoms were assessed using this scale and the scoring will be given. It has 10 menopausal symptoms rated on a scale of 0-10; where (0 – none and 10 – maximum).

- Sweats
- Hot flushes
- Sleep disturbances
- Fatigue
- Vaginal dryness
- Head ache
- Irritability
- Muscle/joint pain
- Breast tenderness
- Palpitation

Frequently-3

Occasionally-2

Rarely-1

Never-0

SCORE

No symotoms	**0**	**0%**
Mild	**1**	**1%-50%**
Moderate	**2**	**51%-75%**
severe	**3**	**76%-100%**

3.10.3 Content Validity :

Content validity of the tool was obtained by getting opinion from seven experts. Based on the expert's suggestions the researcher finalized the tools for the original study.

After construction of questionnaire for "A study to assess the effectiveness of soya milk with honey consumption on reducing physical and physiological symptoms among the post menopausal women with in age group 40-60yrs at choolai. Chennai." It was tested for its validity and reliability.

Validity of the tool was assessed using content validity. Content validity was determined by experts form Nursing and Medical and statistical expert. They suggested certain modifications in tool. After the modifications they agreed this tool for evaluate the effectiveness of soya milk with honey consumption on reducing physical and physiological symptoms among the post menopausal women with in age group 40-60yrs at choolai. Chennai.

After pilot study reliability of the tool was assessed by using split half method and its correlation coefficient r –value was 0.78 .This correlation coefficient is very high and it is good tool for evaluate the effectiveness of soya milk with honey consumption on reducing physical and physiological symptoms among the post menopausal women with in age group 40-60yrs at Choolai, Chennai.

3.11 Ethical Consideration:

Formal permission and approval obtained from the Institutional Ethics committee of Madras Medical College Chennai, before conducting the study. No ethical issues aroused during the course of the study.

3. 12 Pilot Study:

It is a small scale version done in preparation for a major study. The purpose is to find out the feasibility and practicability of study design. The pilot study was conducted in the month of June, to assess the feasibility and

practicability to conduct the study. The data was collected using study instruments.

Protection of Human Rights

- The study was conducted after obtaining clearance from ethical committee, Madras Medical College, Chennai, and permission from the research and medical guide.
- Consent was obtained from all participants before data collection.
- Confidentiality was maintained throughout the study.

- In order to test the feasibility of the study, a pilot study was conducted among six subjects in the same manner as final study. Post Menopausal women with Menopausal symptoms (six in number) were selected using a simple random sampling technique. They were assessed for Menopausal symptoms on the first day using the research tools.

- After the pre assessment, 50gms of soya milk was given day for 20 consecutive days. At the end, on the 21ST day, the subjects were assessed again for Menopausal symptoms using the research tool. The tool was found to be satisfactory in terms of simplicity and clarity. Based on the findings of the pilot study it was concluded that it was feasible and practicable to conduct the main study and criterion measures were found to be effective. As per the feasibility of the study was planned. Pilot study samples are excluded in the main study.

Reliability

Instrument 1: Rating scale on menopausal symptoms

The reliability of the rating scale on menopausal symptoms was elicited by test -retest method and Karl Pearson 'r' was computed for finding out the reliability, "r" was found to be .78 .Positive correlations indicates that the tool was highly reliable.

3.14 **Data Collection Procedure:**

Procedure:

Permission will be obtained, from City Health Officer, survey was done, and number of postmenopausal mothers was identified through the survey. Samples with symptoms are identified and selected through random sampling. The procedure was explained, confidentiality and consent obtained, from samples after explaining about the tools . About5 mins for each client was spent for each client respectively .

Preparation:

1. Soak 1500 gm of soya bean in water the previous night
2. The next day morning pour 3000ml of water and blend thoroughly using mixie.
3. The extract of soya milk should be taken by filtering it in a cheese cloth.
4. The obtained extract must be boiled for a while (10min).
5. After it is cooled, about a teaspoon-150ml of honey should be added for flavor and must be administered.

Intervention protocol:

protocol	**Experimental group**	**Control group**
place	Client house inSelected areas of Choolai	Selected house in areas of Choolai
Tool	Soya milk 100ml with 5ml of honey	Routine care
duration	14 days	14 days
frequency	Once a day	-
Time	Mid morning	-
Administerd by	Investigator	self

3.15 Data Entry and Analysis:

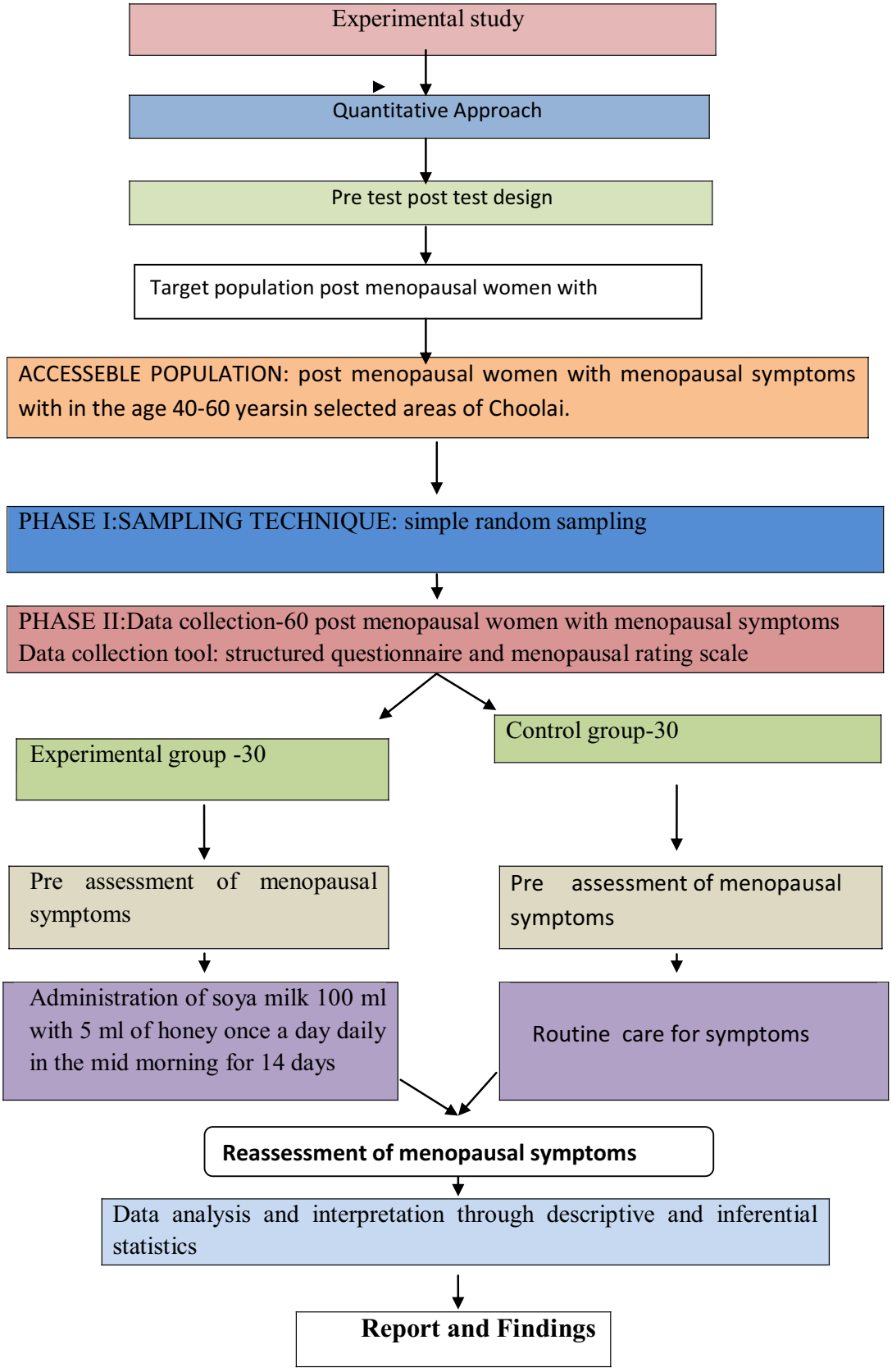
After the data collection, the collected data were organized, tabulated, summarized, and analyzed. The data will be analyzed according to the objectives of the study using descriptive and inferential statistics.

Descriptive Statistics:

Frequency, Percentage Distribution, Mean, Standard deviation and coefficient of variation will be used for calculating the demographic variables

Inferential Statistics:

- Paired "t" test will be used to analyze pre- test and post- test level of menopausal symptoms in experimental and control group.
- Independent "t" test will be used to compare the level of menopausal symptoms and to calculate the effectiveness of the study among experimental and control group.
- Chi squire test will be used to find the association between pre-test level of menopausal symptoms and selected demographic variables among experimental and control group.



3.1schematic representation of the study

CHAPTER IV

Data Analysis and Interpretation

This chapter includes both inferential and descriptive statistics. Statistics is a field of study concerned with techniques or methods of collection of data classification, summarizing interpretation, drawing inferences, testing of hypotheses, making recommendation etc. (Mahajan 2008).

The data was collected from 60 menopausal women with menopausal symptoms. 30 in the control group and 30 in the experimental group to assess the effectiveness of soya milk upon menopausal symptoms among women residing at selected community area, Choolai, Chennai.

Data were analyzed based on the objectives and hypotheses of the study. Data analysis was computed after transferring the collected data into a coding sheet. The researcher used descriptive and inferential statistics for the analysis.

The data tabulated, analyzed and interpreted using descriptive and inferential statistics in the sequence as follows:

4.1Organization Of Data

The findings of the study were grouped and analyzed under the following sections.

Section- A :

Frequency and percentage distribution of demographic variables of post menopausal women in experimental and control group.

Section – B:

Assessment of pre test level of menopausal symptoms among post menopausal women in the experimental and control group.

Section- C **:**

Assessment of post test of menopausal symptoms level among women in the experimental and control group.

Section-D:

Compare the experimental and control group among post menopausal women.

Section- E :

Effectiveness of soya milk on menopausal symptoms among post menopausal women in experimental group.

Section –F:

Association between the level of menopausal reduction and their demographic variables among women in experimental group and control group.

4.2 statistical analysis:

- Demographic variables in categorical/dichotomous were given in frequencies with their percentages., Symptoms scores were given in mean and standard deviation.
- Association between symptom reduction score and demographic variables were analysed using chi square test.
- Difference between experiment and control group symptoms score was analyzed using independent t-test
- Difference between pretest and posttest was analysed using student paired t-test.
- Multiple bar diagram and Boxplot were used to represent the data.
- $P<0.05$ was considered statistically significant.

Section A: frequency and percentage of demographc variables of postmenopausal women

Table 4.1: distribution of demographic variable with post menopausal women

Demographic variables		ExperimentGroup		ControlGroup		Chi square test
		frequency	In %	frequency	In %	
Age	40 -45 years	2	6.7	4	13.3	χ^2=2.29 P=0.51 DF=3
	46 -50 years	11	36.7	12	40.0	
	51 -55 years	14	46.6	9	30.0	
	56 -60 years	3	10.0	5	16.7	
Religion	Hindu	14	46.7	21	70.0	χ^2=3.65 P=0.16 DF=2
	Muslim	7	23.3	5	16.7	
	Christian	9	30.0	4	13.3	
Education	Illiterate	5	16.7	6	20.0	χ^2=2.09 P=0.55 DF=3
	Primary	14	46.7	18	60.0	
	Middle school	6	20.0	3	10.0	
	High school and above	5	16.6	3	10.0	
Occupation	Home maker	20	66.6	22	73.3	χ^2=2.49 P=0.47 DF=3
	Govt employment	2	6.7	3	10.0	
	Private employment	2	6.7	3	10.0	
	Self employment	6	20.0	2	6.7	
Income	< Rs.3000	5	16.6%	4	13.3	χ^2=4.37 P=0.22 DF=3
	Rs.3000-5000	2	6.7%	3	10.0	
	Rs 5000-10000	9	30.0%	3	10.0	
	> Rs.10000	14	46.7%	20	66.7	
Dietary habits	Vegetarian	4	13.3%	3	10.0	χ^2=0.16 P=0.68 DF=1
	Non Vegetarian	26	86.7%	27	90.0	
Marital status	Married	19	63.4%	20	66.7	χ^2=0.08 P=0.98 DF=2
	Unmarried	1	3.3%	1	3.3	
	Widow	10	33.3%	9	30.0	
No. of children	One	7	23.3%	13	43.3	χ^2=2.82 P=0.24 DF=2
	Two	15	50.0%	12	40.0	
	> Two	8	26.7%	5	16.7	
Medical illness	Asthma	1	3.3%	0	0.0	χ^2=1.07 P=0.31 DF=1
	Other diseases	29	96.7	30	100.0	
Menopause age	40-45 yrs	8	26.7	11	36.7	χ^2=2.49 P=0.29 DF=2
	46-50 yrs	18	60.0	12	40.0	
	51-55 yrs	4	13.3	7	23.3	
Under any treatment	Yes	2	6.7	5	16.7	χ^2=1.45 P=0.22 DF=1
	No	28	93.3	25	83.3	

There is no statistically significant variation with demographic variable between experimental and control group.Table shows the demographic information of post menopausal women those who are participated in this

study on “A study to assess the effectiveness of soyamilk with honey consumption on reducing physical and physiologial symptoms among the post menopausal women with in age group 40-60yrs at Choolai. Chennai”.Both groups are equally distributed.

Among the study participants,

In regard to age, In experimental group 2(6.7%) of women were with in the age group of 40-45 years, 11(36.7%) were between 46-50 years, 14(46.6%) were within 51-55 years and 3(10.0%) were within 56-60 years respectively. In control group,4(13.3%) were with in age group of 40-45 years, 12(40.0%) were with in 46-55 years, 9(30.0%) were within 56-60 years.

In experimental group, regarding to **religious status** majority of them 14(46.7%) and in control group 21(70.0%) are Hindu.

regarding **educational status** , majority of samples14(46.7%) in experimental group and 18(60.0%) in control group were primarily educated.

In regard to **occupation,** majority in experimental group 20(66.7%) and in control group 22(73.3%) were home maker.

Regarding **income**, 14(46..7%) in experimental group and 20(66.7%) in control group earns a monthly income of above 10,000 only, and they all belongs to a middle class family.

Regarding **diertary pattern** , in experimental group, 26(86.7%) and in control group 27(90.0%) are non vegetarians.

In experimental group, 19 63.4%, and in control group 20 66.7% were married.

In experimental group, majority of women 15(50.0%) have 2 children and in control group 13(43.3%) majority were with only 1 children.

About 29(96.0%) in experimental group and 30(100.0%) in control group have other type of **illnes**s like asthma or diabetes or hypertension.

Regarding **menopausal attainment age**, 18(60.0%) in experimental group and 12(40.0%) were under the age group 46-55years.

About 28(93.3%) in experimental group and 25(83.3%) in control group were under no **treatment**.

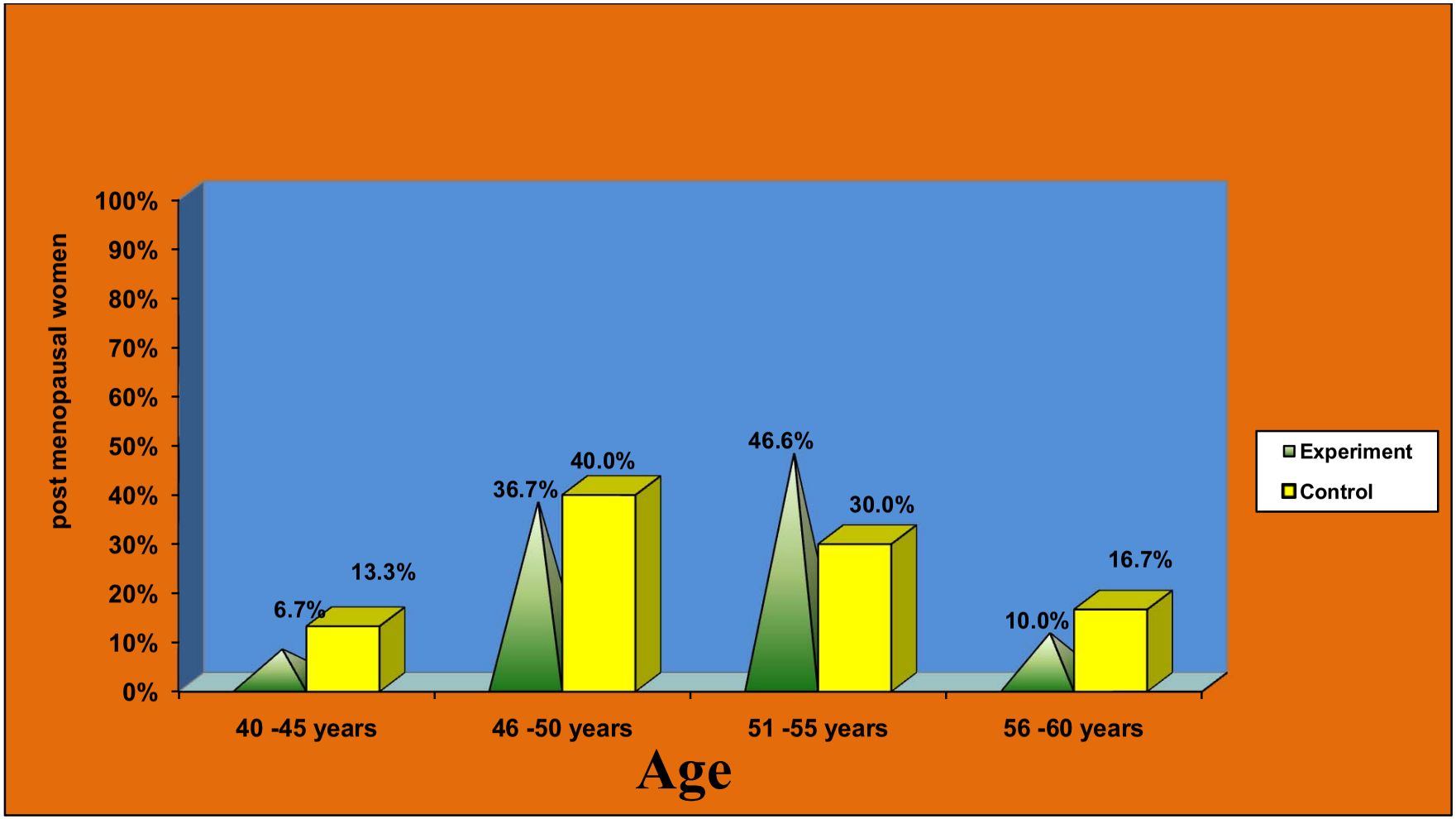


Figure 4.1.Age wise distribution of post menopausal women

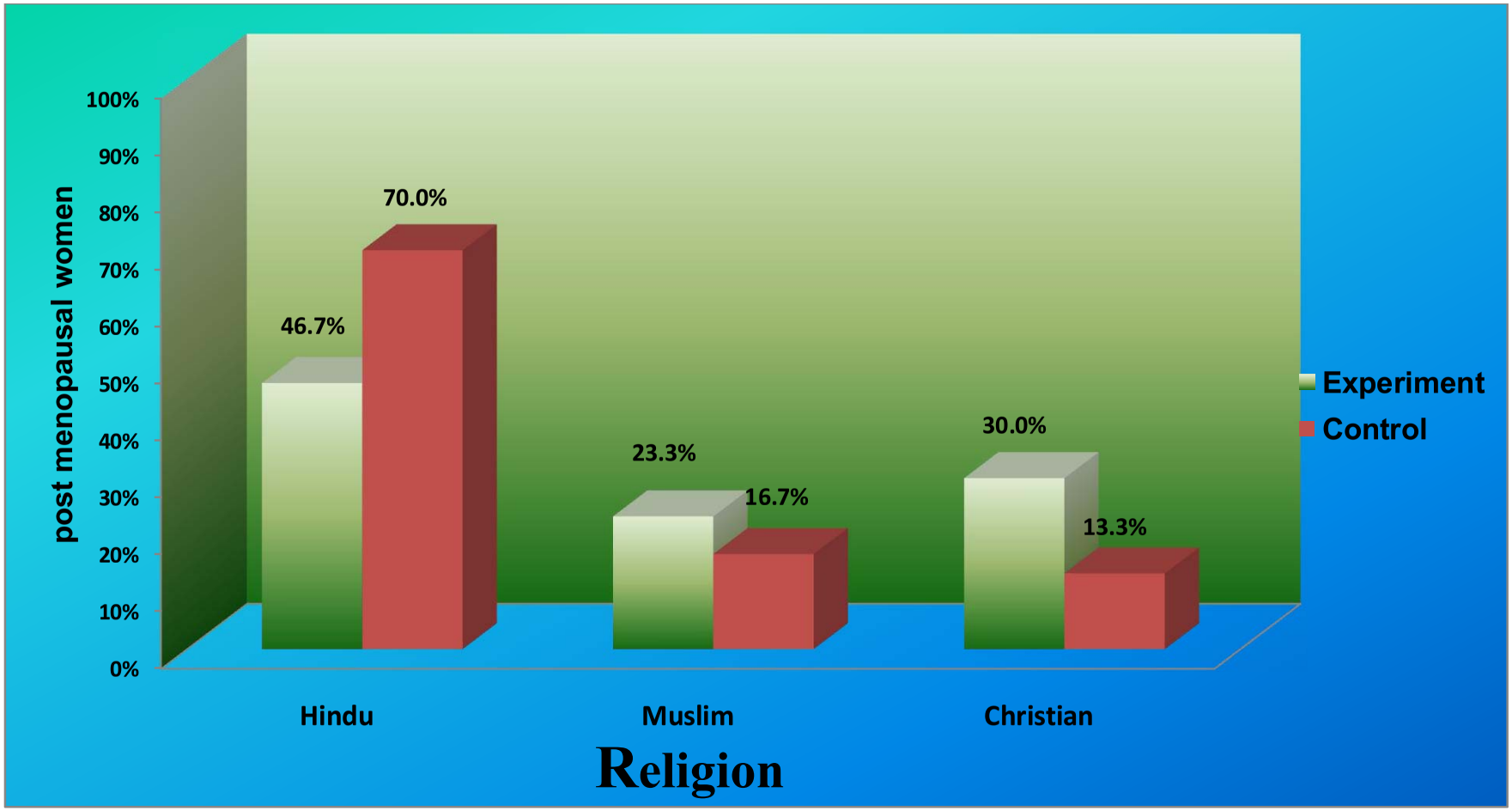


Figure 4.2 . Religion wise distribution of post menopausal women

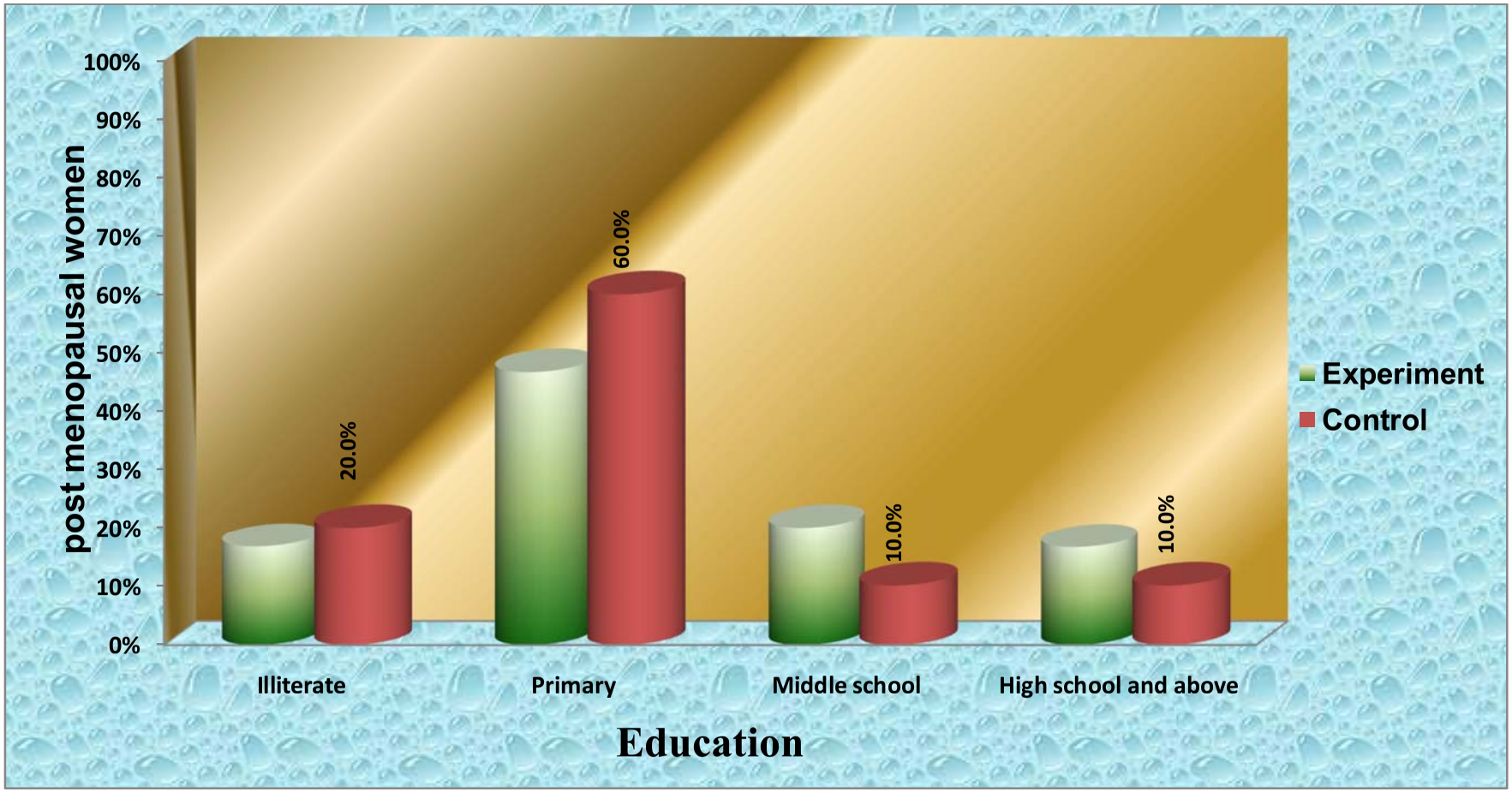


FIGURE 4.3. educational wise distribution of post menopausal women

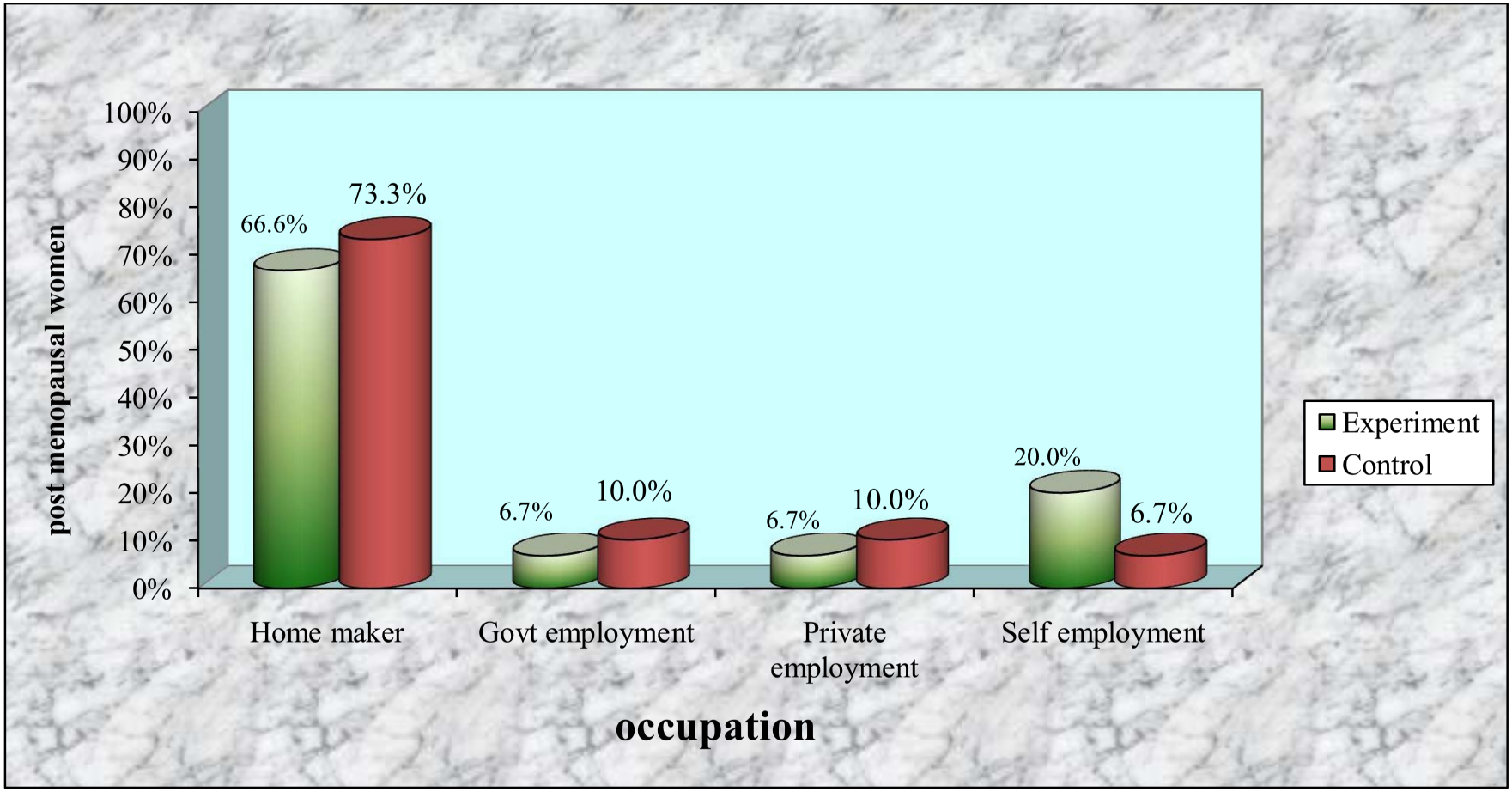


Figure 4.4. occupation wise distribution of post menopausal women

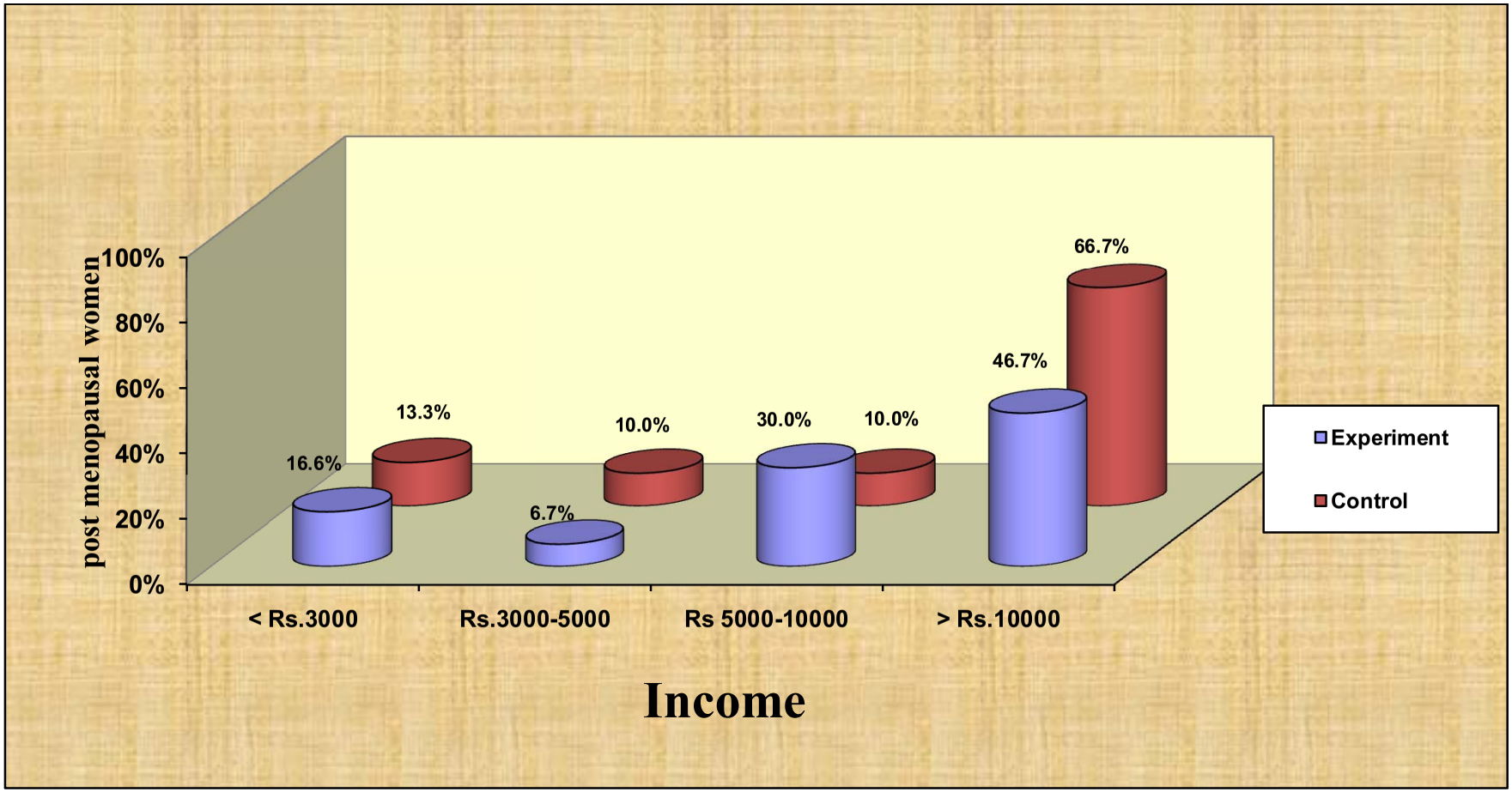


Figure 4.5. Income wise distribution of post menopausal women

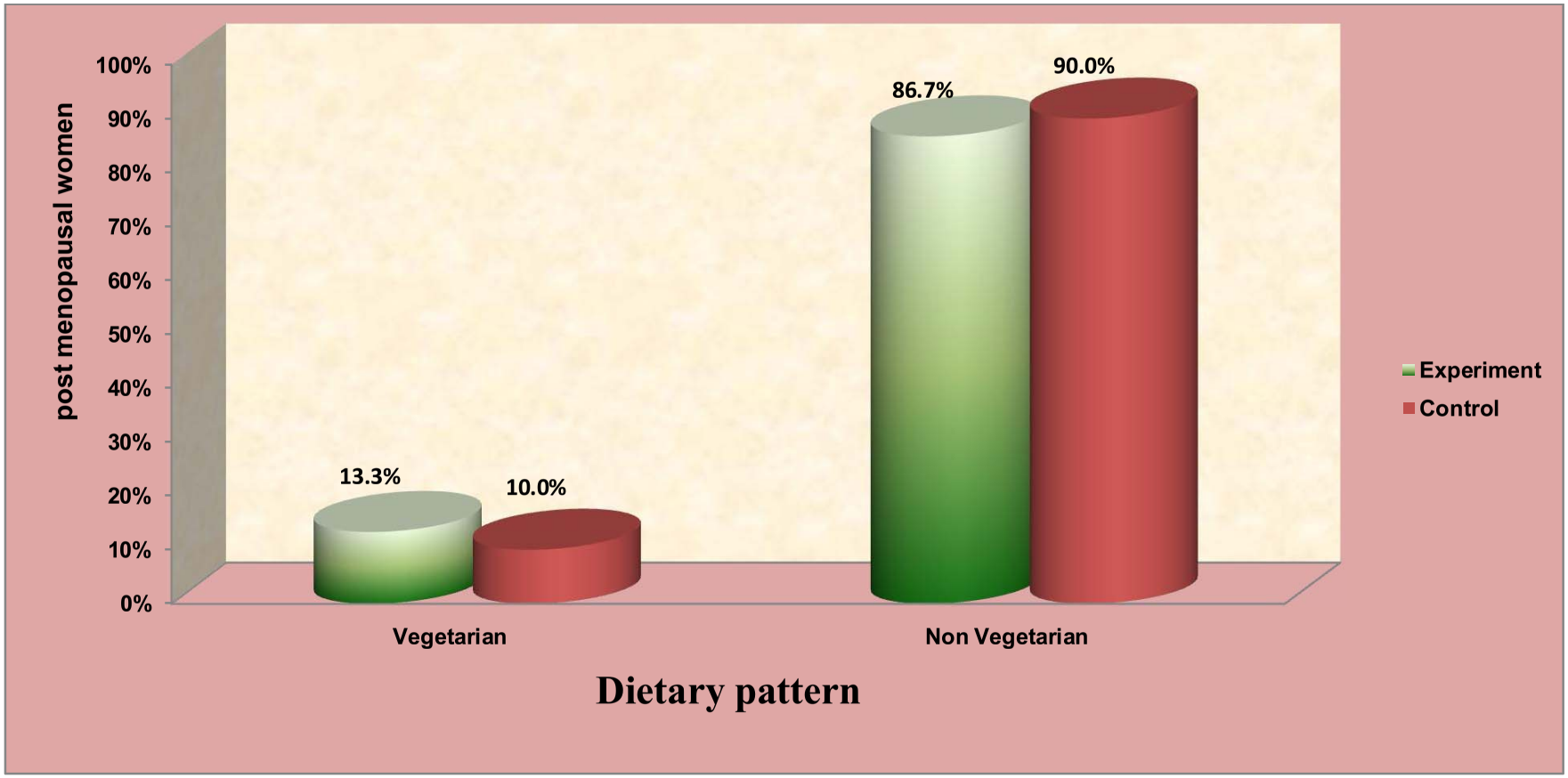


Figure 4.6: dietary pattern wise distribution of post menopausal women

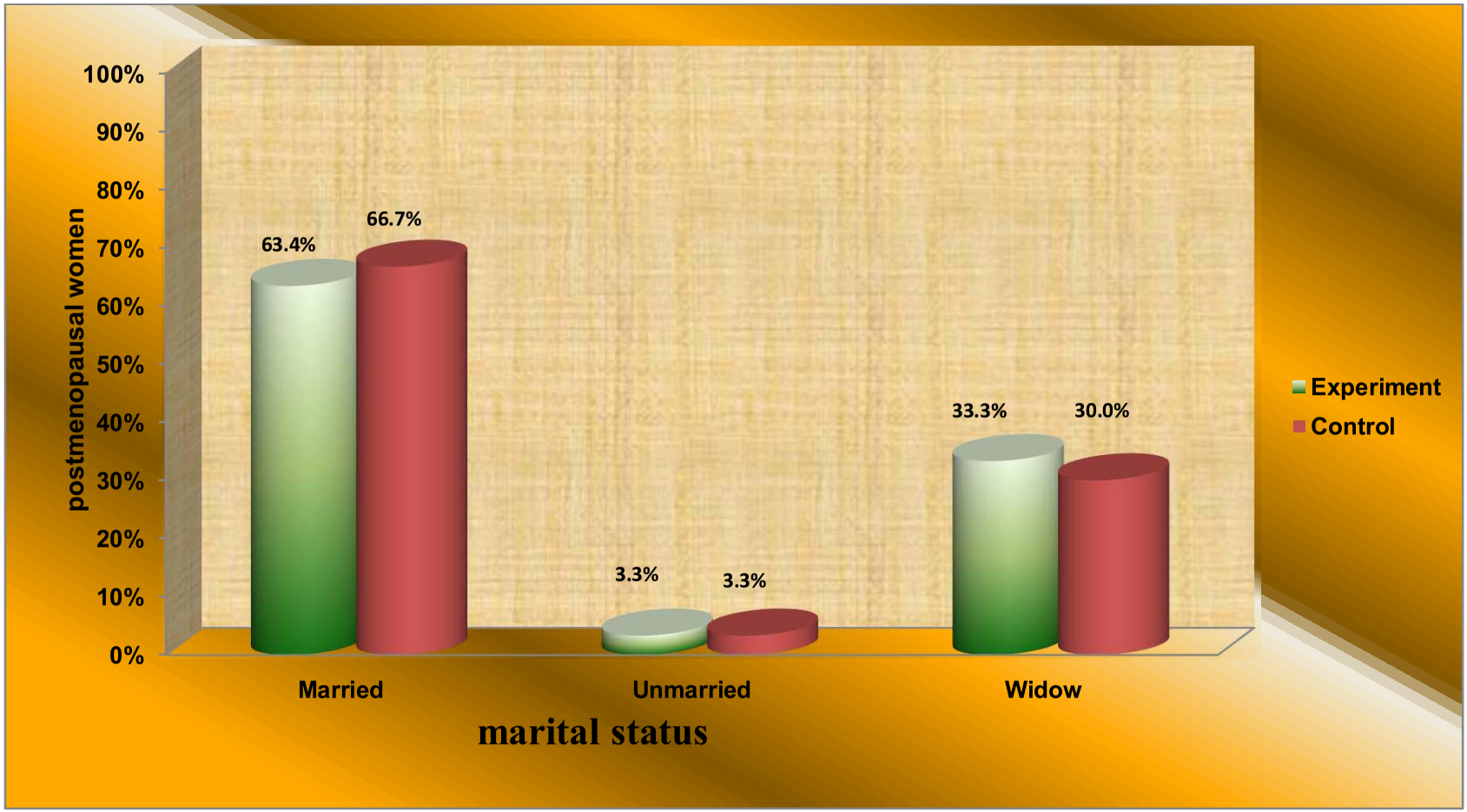


Figure 4.7: marital status wise distribution

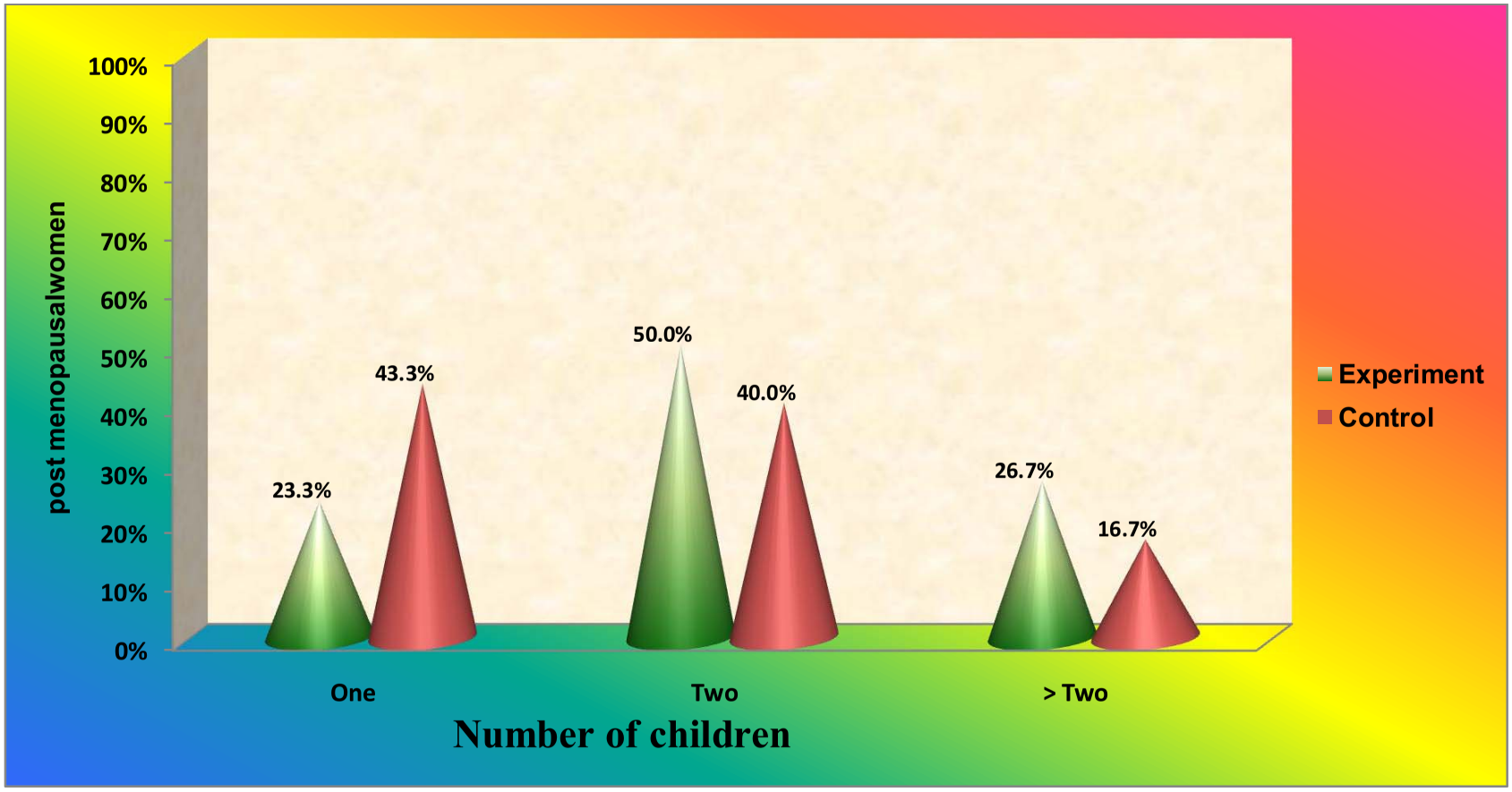


Figure 4.8. number of children wise distribution

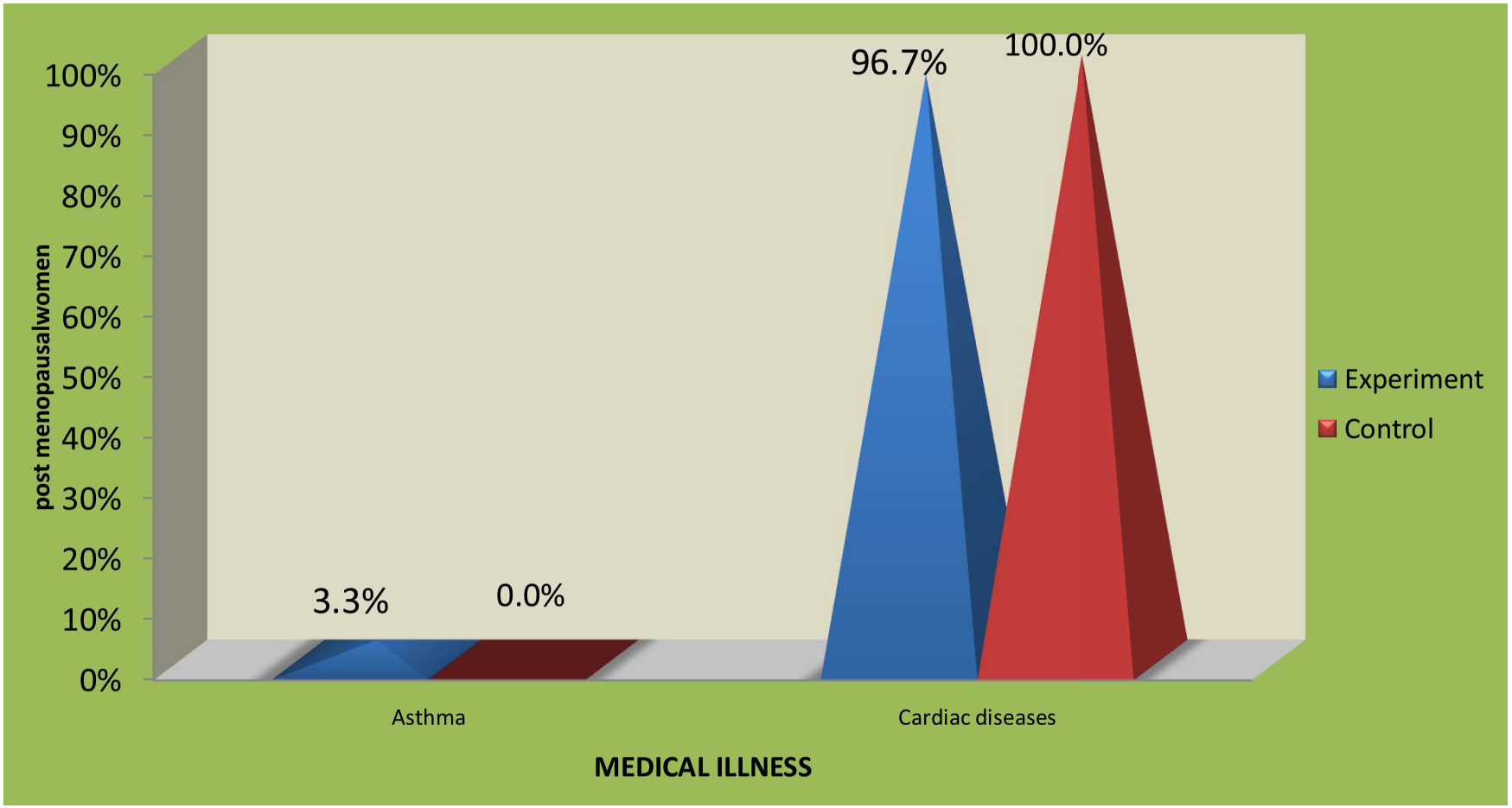


Figure 4.9: Medical Illness wise distribution

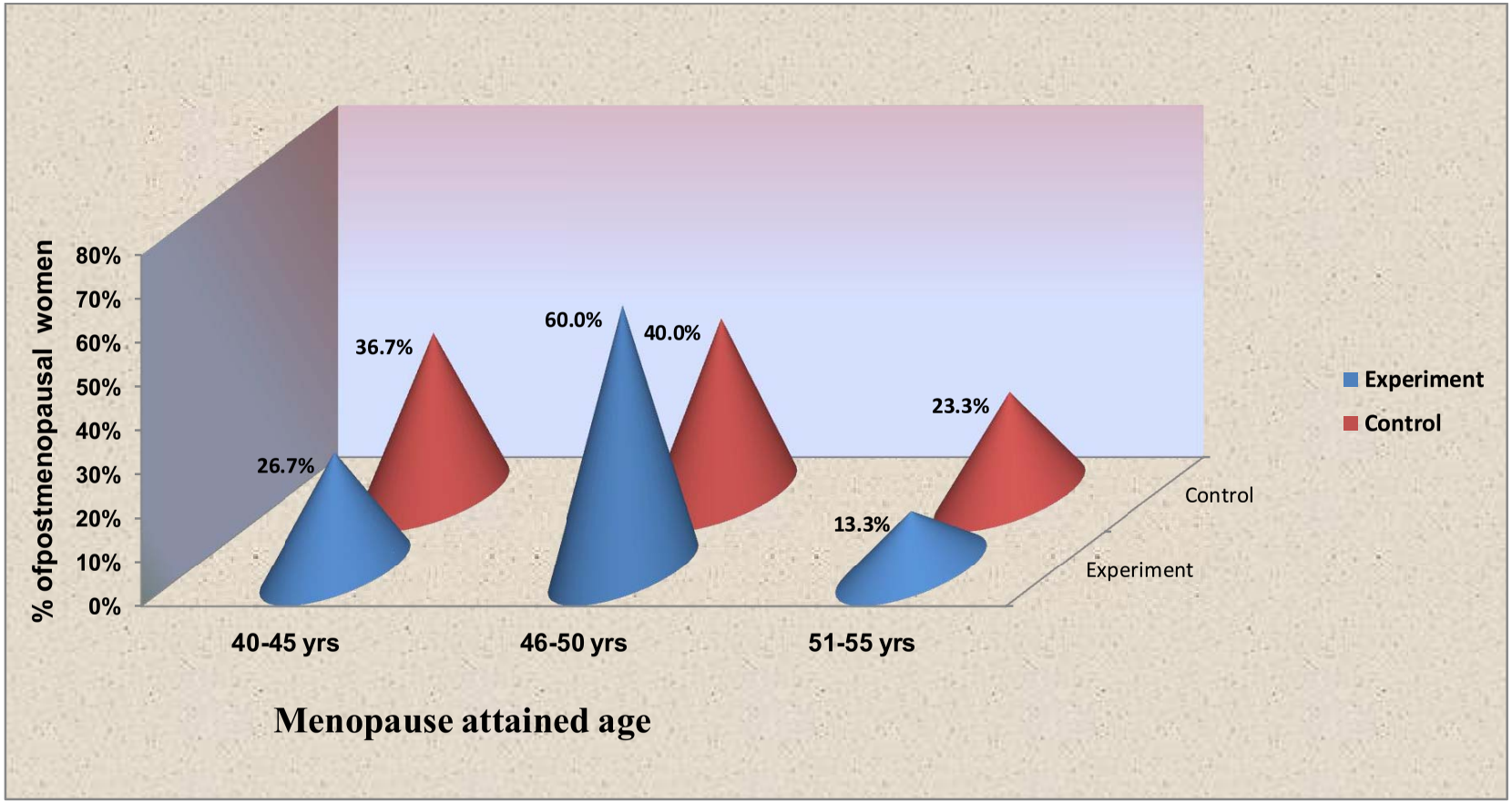


Figure 4.10: Menopause Attained Age wise distribution

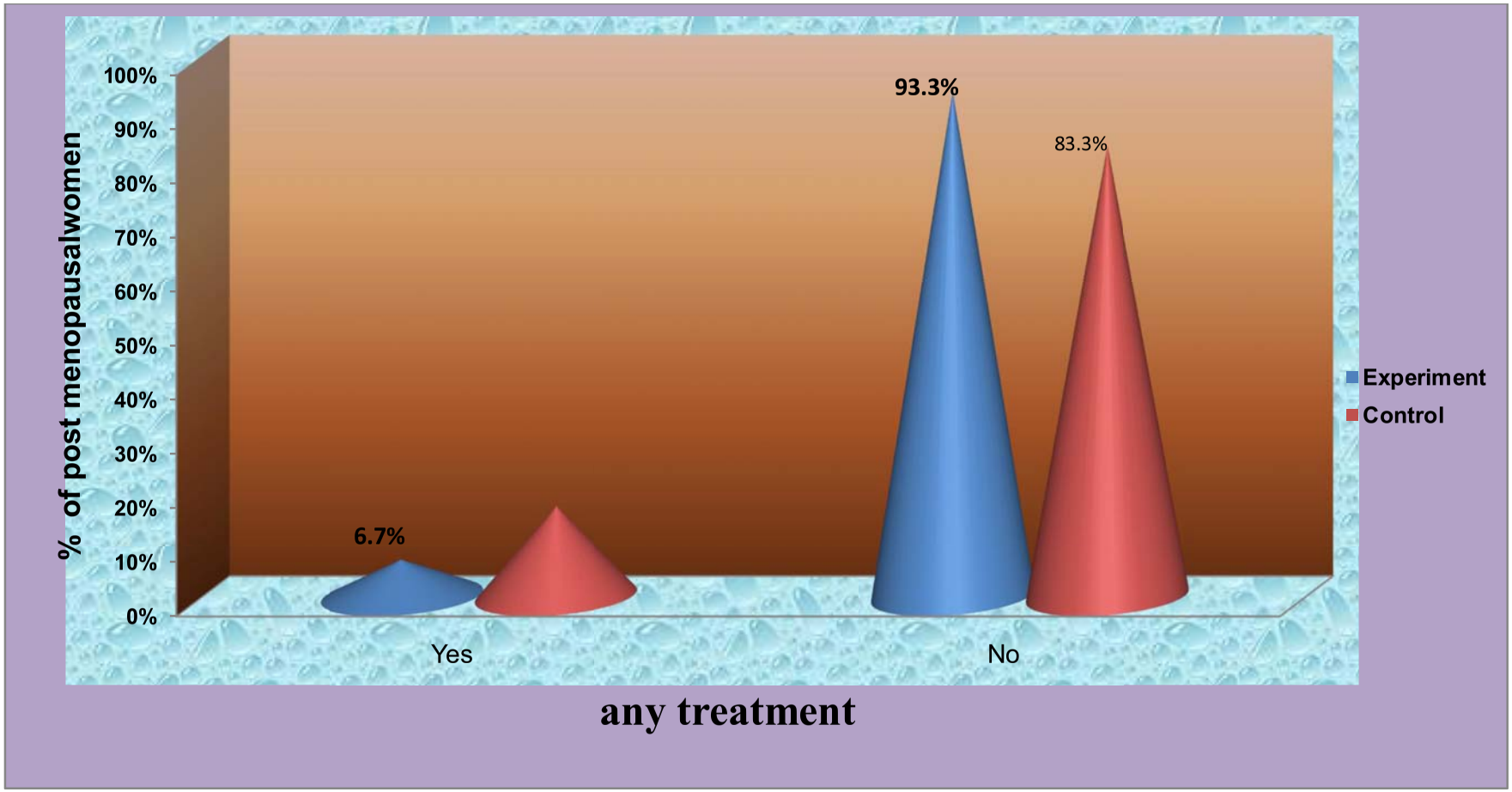


Figure 4.11: Treatment wise distribution

Section B: assessment of pretest level of menopausal symptoms among the post menopausal women in the experimental and control group

Objective 1: To assess the pre test level of menopausal symptoms among postmenopausal women in experimental group and control group

Table 4.2: each domain wise pretest percentage of 69enopausal symptoms score

symptoms		Maximum score	Mean	SD	% of menopausal symptoms
Experiment	hot flushes	3	2.20	1.03	73.3
	sleep distribution	3	2.17	0.75	72.3
	night sweats	3	1.73	1.08	57.7
	fatigue	3	1.90	0.92	63.3
	vaginal dryness	3	.93	1.01	31.0
	headache	3	1.47	1.14	49.0
	irritability	3	2.07	0.78	69.0
	joint discomfort	3	1.90	0.88	63.3
	breast tenderness	3	1.40	1.00	46.7
	palpitation	3	1.40	0.72	46.7
	Total	30	17.17	2.80	57.2
Control	hot flushes	3	2.23	0.97	74.3
	sleep distribution	3	2.13	0.78	71.0
	night sweats	3	1.63	1.13	54.3
	fatigue	3	1.87	0.94	62.3
	vaginal dryness	3	0.90	1.03	30.0
	headache	3	1.40	1.13	46.7
	irritability	3	1.93	0.91	64.3
	joint discomfort	3	1.87	.90	62.3
	breast tenderness	3	1.37	1.03	45.7
	palpitation	3	1.33	0.76	44.3
	Total	30	16.67	3.09	55.6

Table shows each domain wise pretest percentage of menopausal symptoms among postmenopausal women in experimental group and control group. In experimental group,menopausal symptom with maximum score was hot flushes (73.3%) and minimum score was vaginal dryness(31.0%). Among control group , the maximum score was hot flushes (74.3%) and minimum score was vaginal dryness(30.0%). The total mean score in experimental group was 17.17 and control group was 16.67.

Section C: Assessment of post test of menopausal symptoms level among women in the experimental and control group

Table 4.3: Pretest level of menopausal symptoms among postmenopausal women in experimental group and control group

Level of symptoms	Group				
	Experiment		Control		
	frequency	In %	frequency	In %	Chi square test
Mild	8	26.7	10	33.3	$\chi 2=2.33$ P=0.05 DF=3
Moderate	22	73.3	20	66.7	
Severe	0	0.0	0	0.0	
Total	30	100.0%	30	100.0	

* significant at P≤0.05 ** highly significant at P≤0.01 *** very high significant at P≤0.001

The table reveals that,

In pretest, among experiment, 26.7% of the women have mild level of symptoms, 73.3% of them have moderate level of symptoms and none of them have severe symptoms. Among control, 33.3% of the women have mild level of symptoms, 66.7% of them have moderate level of symptoms and none of them have severe symptoms. Statistically there is no significant difference between experiment and control group. It was confirmed using chi square test.

Score interpretation

No symptoms	0	0%
Mild	15	1%-50%
Moderate	16-22	51%-75%
Severe	23-30	76%-100%

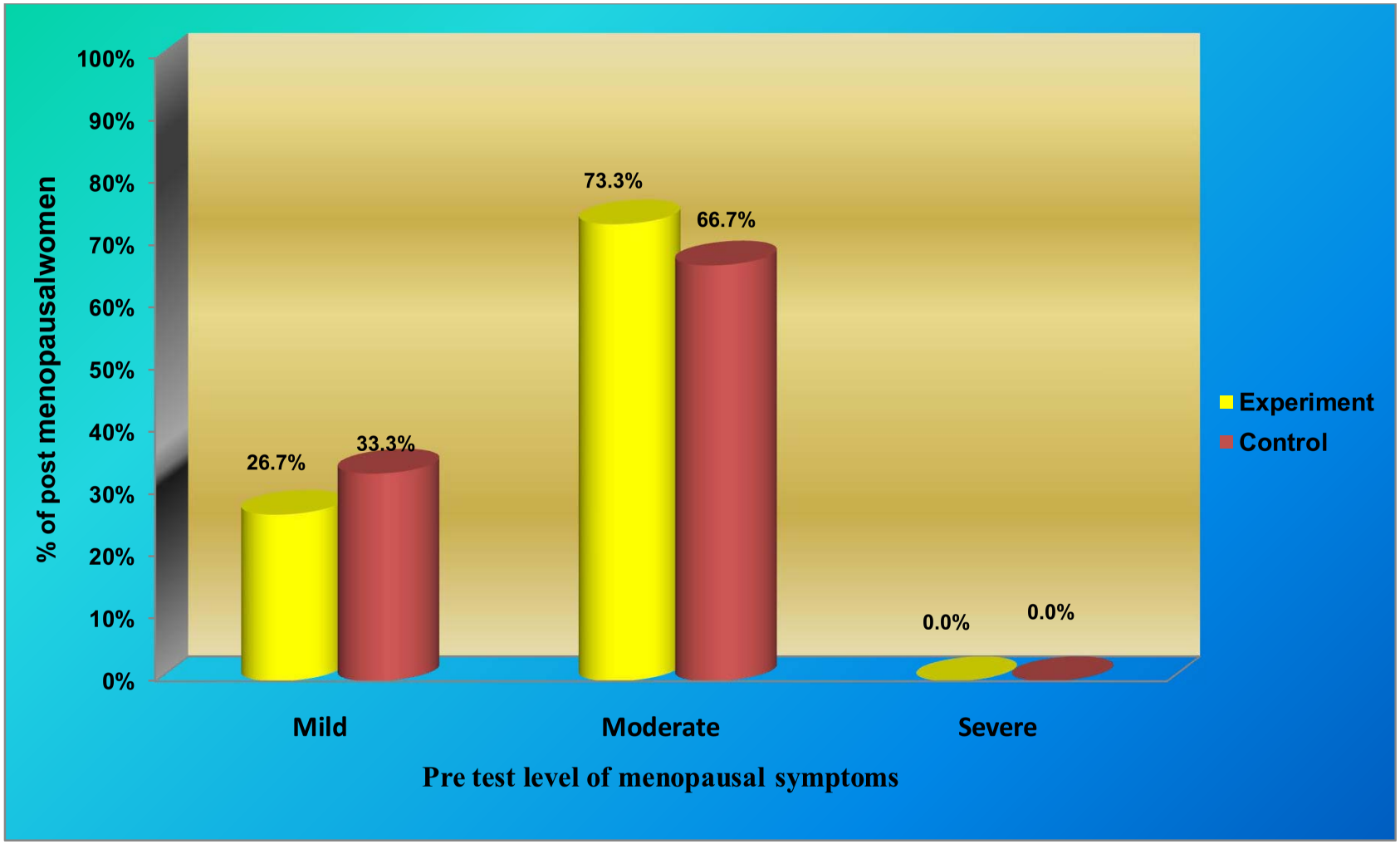


Figure 4.12: Pre Test Level Of Menopausal Symptom

Objective 2: To assess the post test level of menopausal symptoms among postmenopausal women in control group and experimental group.

Table 4.4: each domain wise post test percentage of post menopasual symptoms score

symptoms		Maximum score	Mean	SD	% of menopausal symptoms
Experiment	hot flushes	3	1.43	.73	47.7
	sleep distribution	3	1.20	.76	40.0
	night sweats	3	.87	.78	29.0
	fatigue	3	1.30	.75	43.3
	vaginal dryness	3	.57	.68	19.0
	headache	3	.77	.68	25.7
	irritability	3	1.07	.69	35.7
	joint discomfort	3	1.40	.72	46.7
	breast tenderness	3	.60	.56	20.0
	palpitation	3	1.07	.78	35.7
	total	30	10.27	2.84	34.2
Control	hot flushes	3	2.10	1.06	70.0
	sleep distribution	3	1.97	.89	65.7
	night sweats	3	1.50	1.22	50.0
	fatigue	3	1.73	1.08	57.7
	vaginal dryness	3	.80	1.03	26.7
	headache	3	1.33	1.18	44.3
	irritability	3	1.90	1.03	63.3
	joint discomfort	3	1.77	1.01	59.0
	breast tenderness	3	1.20	1.10	40.0
	palpitation	3	1.20	.85	40.0
	total	30	15.50	3.35	51.7

Table shows each domain wise post test percentage of menopausal symptoms among postmenopausal women in experimental group and control group. In experiment , the total mean score was 1.07(34.2%) and in control group the mean value was15.50 (51.7) respectively.

Table 4.5: posttest level of menopausal symptoms among postmenopausal women in experimental group and control group

Level of symptoms	Group				
	Experiment		Control		
	frequency	In %	freuqency	in %	Chi square test
Mild	25	83.3	12	40.0	$\chi 2$=11.91
Moderate	5	16.7	18	60.0	P=0.001***
Severe	0	0.0	0	0.0	DF=1
Total	30	100.0	30	100.0	

* significant at P≤0.05 ** highly significant at P≤0.01 *** very high significant at P≤0.001

In posttest, among experiment, 83.3% of the women have mild level of symptoms, 16.7% of them have moderate level of symptoms and none of them have severe symptoms. Among control, 40.0% of the women are having mild level of symptoms, 60.0% of them have moderate level of symptoms and none of them have severe symptoms. Statistically there is a significant difference between experiment and control group. It was confirmed using chi square test.

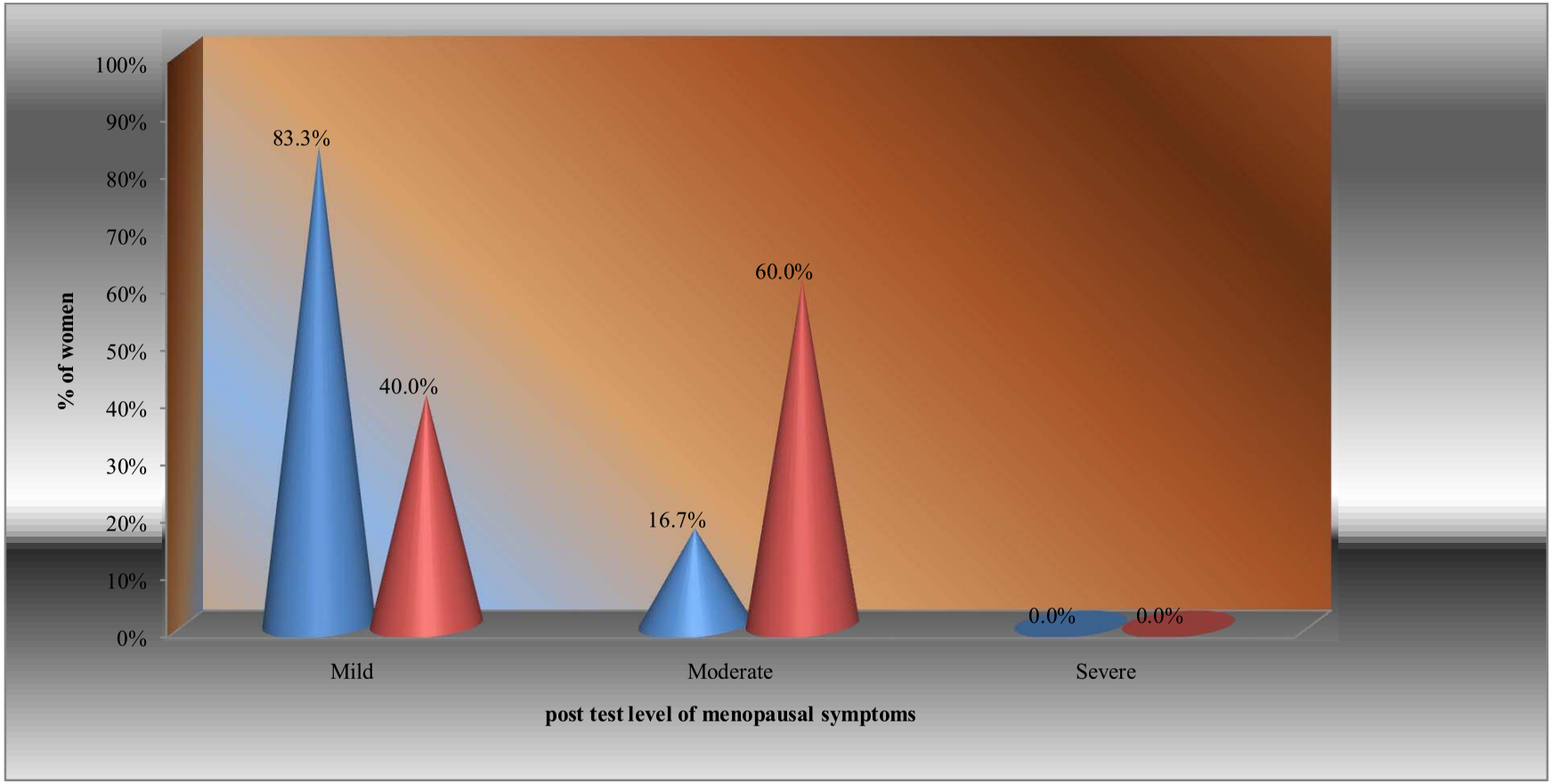


figure 4.13: post test level of menopaual symptom

Section D: compare the experimental and control group among postmenopausal women

Objective3: To evaluate the effectiveness of soya milk on menopausal symptoms among postmenopausal women in experimental group.

Table 4.6 comparison of pretest and postest mean menopausal symptom score (experiment)

	Group				Mean difference	Student Paired t-test
	Pretest		Posttest			
	Mean	SD	Mean	SD		
hot flushes	2.20	1.03	1.43	.73	0.77	**t=3.03 p=0.001*** **
sleep distribution	2.17	.75	1.20	.76	0.97	**t=5.29 p=0.001*** **
night sweats	1.73	1.08	.87	.78	0.87	**t=3.56 p=0.001*** **
fatigue	1.90	.92	1.30	.75	0.60	**t=2.57 p=0.001*** **
vaginal dryness	.93	1.01	.57	.68	0.37	**t=1.99 p=0.05***
headache	1.47	1.14	.77	.68	0.70	**t=2.57 p=0.001*** **
irritability	2.07	.78	1.07	.69	1.00	**t=4.66 p=0.001*** **
joint discomfort	1.90	.88	1.40	.72	0.50	**t=2.28 p=0.001*** **
breast tenderness	1.40	1.00	.60	.56	0.80	**t=3.78 p=0.001*** **
palpitation	1.40	.72	1.07	.78	0.33	**t=1.96 p=0.05***

* significant at P≤0.05 ** highly significant at P≤0.01 *** very high significant at P≤0.001

On comparing the pre test and post test mean post menopausal symptom score, in experimental group , after the consumption of soya milk , there is a statistically significant improvement in majority of symptoms. Almost all the symptoms are very highly significant (,p=0.001), except for vaginal dryness and palpitation which is less significant(,p=0.05).

Table 4.7 comparison of pretest and postest mean menopausal symptom score (control)

	Group				Mean difference	Student Paired t-test
	Pretest		Posttest			
	Mean	SD	Mean	SD		
hot flushes	2.20	1.03	2.10	1.06	0.10	t=0.62 p=0.53
sleep distribution	2.17	.75	1.97	.89	0.20	t=1.90 p=0.07
night sweats	1.73	1.08	1.50	1.22	0.23	t=1.68 p=0.10
fatigue	1.90	.92	1.73	1.08	0.17	t=1.68 p=0.10
viginal dryness	.93	1.01	.80	1.03	0.13	t=1.36 p=0.18
headache	1.47	1.14	1.33	1.18	0.14	t=1.43 p=0.16
irritability	2.07	.78	1.90	1.03	0.17	t=0.25 p=0.80
joint discomfort	1.90	.88	1.77	1.01	0.13	t=1.36 p=0.18
breast tenderness	1.40	1.00	1.20	1.10	0.20	t=1.72 p=0.10
palpitation	1.40	.72	1.20	.85	0.20	t=1.68 p=0.11

* significant at P≤0.05 ** highly significant at P≤0.01 *** very high significant at P≤0.001

Table reveals the pretest and post test mean difference among the control group.

Pretest and posttest mean menopausal symptom score among control women was analyzed using student paired t-test. Comparing pre and post test in control group, there is no significant improvement in menopausal symptom reduction.

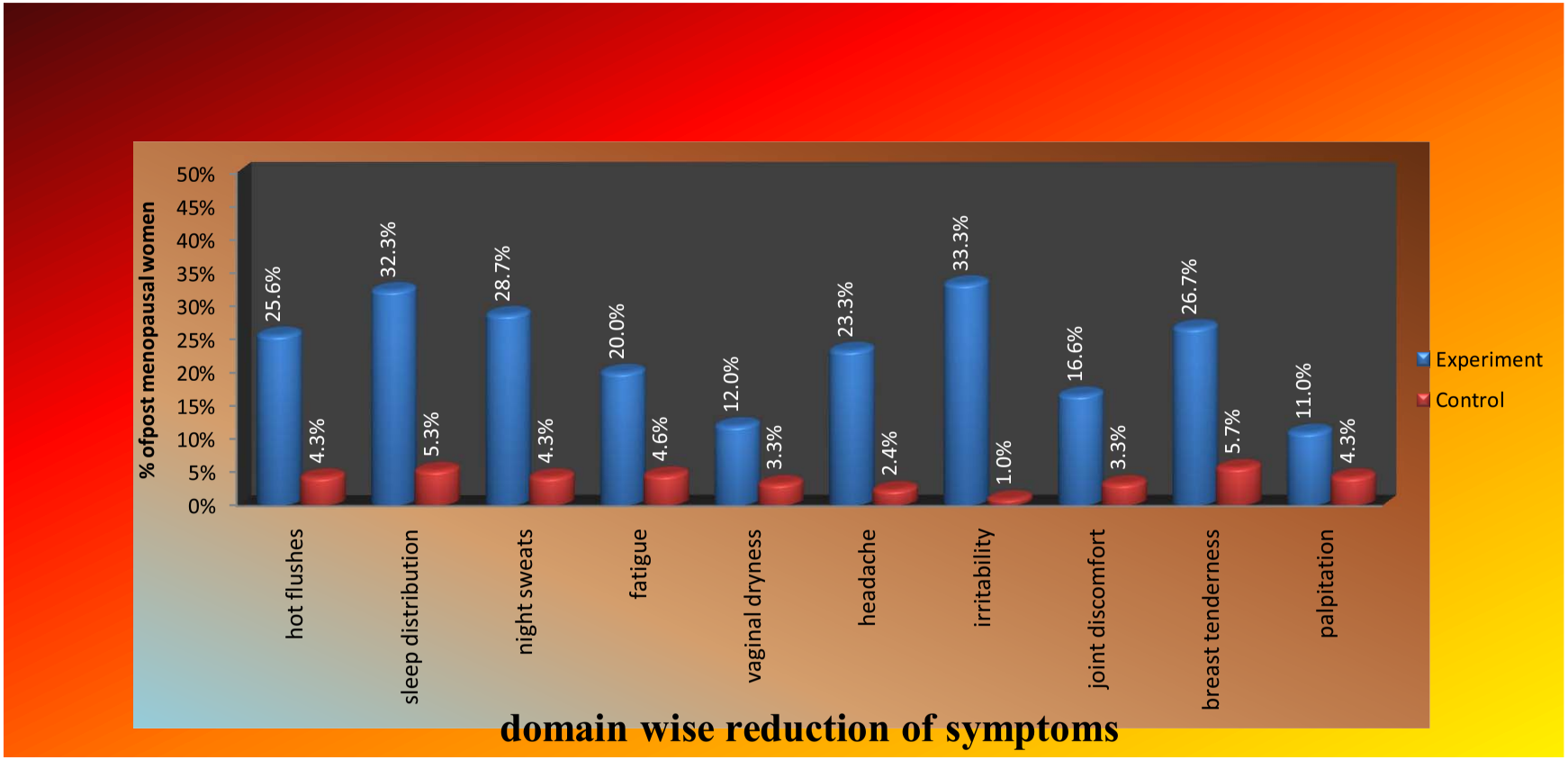


Figure 4.14. represents the domain wise reduction of menopausal score

Table 4.8: comparison of pretest and posttest menopausal symptoms among postmenopausal women

		Symptom score		Mean difference	Student paired t-test
		Mean	SD		
Experiment	pretest	17.17	2.81	6.90	**t=9.26 p=0.001 ***significant**
	posttest	10.27	2.84		
Control	pretest	16.67	3.08	1.17	t=1.71 p=0.10 not significant
	posttest	15.50	3.35		

* significant at P≤0.05 ** highly significant at P≤0.01 *** very high significant at P≤0.001

Table shows the comparison of overall pretest and posttest.

Considering experiment group

The pretest mean score was 17.17 score and the posttest mean score was 10.27 . The Difference is 6.90 score. The difference between pretest and posttest score is large and ther is a statistically significant improvement. Differences between pretest and posttest score was analyzed using Student paired-test.

Considering control group,

The pretest mean score was 16.67 score and in posttest , the mean score was 15.50. Difference is 1.17 score. The difference between pretest and posttest score is small and it is not statistically significant. Differences between pretest and post test score was analysed using Student paired t-test.

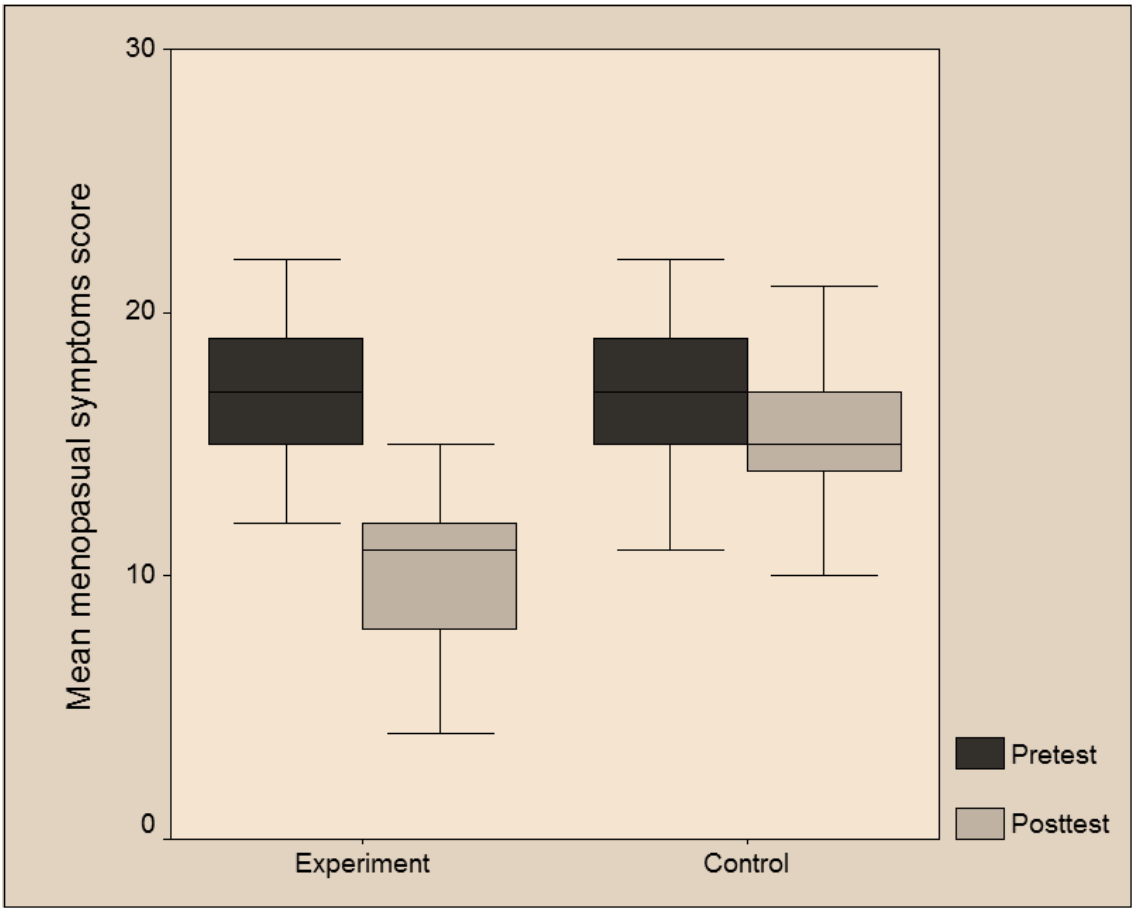


Figure 4.15 Box-plot compares the pretest and posttest mean menopausal symptoms score among experiment and control group of postmenopausal women

Table 4.9:comparison of experiment and control menopausal symptoms among postmenopausal women.

		Symptom score		Mean difference	Student independent t-test
		Mean	SD		
Pretest	Experiment	17.17	2.81	0.50	t=0.66 p=0.51 not significant
	Control	16.67	3.08		
posttest	Experiment	10.27	2.84	5.23	**t=6.52 p=0.001*** significant**
	Control	15.50	3.35		

* significant at P≤0.05 ** highly significant at P≤0.01 *** very high significant at P≤0.001

Table shows the comparison of overall pretest and posttest. Considering pretest

Among experimental group, the mean score was 17.17 score and in control , it was16.67 score. Difference is 0.50 score. The difference between experiment and control score was small and it is not statistically significant. Differences between experiment and control score was analysed using Student independent t-test.

Considering posttest

Among experiment, women have 10.27 score and in control , they have15.50 score. Difference is 5.23 score. The difference between experiment and control score is large and it is statistically significant. Differences between experiment and control score was analysed using Student independent t-test. P≤0.001 with 95% confidence interval

.

Section E: Table 4.10: effectiveness of soyamilk with honey consumption on reducing physical and physiologial symptoms among the post menopausal women

		Max score	*Mean symptoms score*	Mean Difference in symptom score with 95% Confidence interval	Percentage of symptom score with 95% Confidence interval
Experiment	Pretest	30	17.17	6.90(5.38 – 8.42)	23.0%(17.9% – 28.1%)
	Posttest	30	10.27		
Control	Pretest	30	16.67	1.17(0.59 – 1.75)	3.9%(1.9% –5.8%)
	Posttest	30	15.50		

Table no10 shows the effectiveness of soyamilk with honey consumption on reducing physical and physiological symptoms among the post menopausal women.

On an average, in experimental group, the net reduction rate of menopausal symptoms was 23.0% and in control group it was 3.9% .This shows the effectiveness of soya milk with honey consumption. Differences between pretest and posttest score was analysed using percentage with 95% CI and mean difference with 95% CI.

Table 4.11: each domainwise effectiveness of soyamilk with honey consumption

domains	Experiment In %			Control In %		
	pretest	posttest	difference	pretest	posttest	difference
hot flushes	73.3	47.7	**25.6**	74.3	70.0	**4.3**
sleep distribution	72.3	40.0	**32.3**	71.0	65.7	**5.3**
night sweats	57.7	29.0	**28.7**	54.3	50.0	**4.3**
fatigue	63.3	43.3	**20.0**	62.3	57.7	**4.6**
vaginal dryness	31.0	19.0	**12.0**	30.0	26.7	**3.3**
headache	49.0	25.7	**23.3**	46.7	44.3	**2.4**
irritability	69.0	35.7	**33.3**	64.3	63.3	**1.0**
joint discomfort	63.3	46.7	**16.6**	62.3	59.0	**3.3**
breast tenderness	46.7	20.0	**26.7**	45.7	40.0	**5.7**
palpitation	46.7	35.7	**11.0**	44.3	40.0	**4.3**
overall	57.2	34.2	**23.0**	55.6	51.7	**3.9**

Table shows each domain percentage of symptom reduction score

This shows the effectiveness soyamilk with honey consumption on reducing physical and physiological symptoms among the post menopausal women**.**

The overall pre test and post test difference in control group is 3.9% and experimental group it is 23.0%.thus the difference percentage is 23.0%. this shows the effectivenss of soya nilk on post menopausal symtoms.

Objective 4: To associate the menopausal symptoms among post menopausal women and their selected demographic variables

Section F: Table 4.12: association between pretest level of symptom reduction score and women demographic variables(experiment)

Demographic variables		LEVEL OF SYMPTOMS REDUCTION SCORE					
		Below average (≤ 6.9)		Above average (> 6.9)			
		frequency	in%	frequency	in%	Total	Chi square test
Age	40 -45 years	2	0.0	0	0.0	2	
	46 -50 years	8	72.7	3	27.3	11	**$\chi 2$=8.17 P=0.05***
	51 -55 years	4	28.5	10	71.5	14	**DF=3**
	56 -60 years	1	33.3	2	66.7	3	
Religion	Hindu	5	35.7	9	64.3	14	
	Muslim	4	57.1	3	42.9	7	$\chi 2$=2.28 P=0.32
	Christian	6	66.7	3	33.3	9	DF=2
Education	Illiterate	5	100.0	0	20.0	5	
	Primary	7	50.0	7	50.0	14	**$\chi 2$=7.49 P=0.05***
	Middle school	2	33.3	4	66.7	6	**DF=3**
	High school and above	1	20.0	4	80.0	5	
Occupation	Home maker	9	45.0	11	55.0	20	
	Govt employment	1	50.0	1	50.0	2	$\chi 2$=4.86 P=0.18
	Private employment	0	0.0	2	100.0	2	DF=3
	Self employment	5	83.3	1	16.7	6	
Income	< Rs.3000	5	100.0	0	0.0	5	
	Rs.3000-5000	1	50.0	1	50.0	2	**$\chi 2$=7.70 P=0.05***
	Rs 5000-10000	5	55.6	4	44.4	9	**DF=3**
	> Rs.10000	4	28.6	10	71.4	14	
Dietary habits	Vegetarian	1	25.0	3	75.0	4	$\chi 2$=1.15 P=0.28
	Non Vegetarian	14	53.8	12	46.2	26	DF=1
Marital status	Married	10	52.6	9	47.4	19	
	Unmarried	0	0.0	1	100.0	1	$\chi 2$=1.05 P=0.59
	Widow	5	50.0	5	50.0	10	DF=2
No. of children	One	1	14.3	6	85.7	7	
	Two	9	60.0	6	40.0	15	$\chi 2$=4.67 P=0.10
	> Two	5	62.5	3	37.5	8	DF=2
Medical illness	Asthma	0	0.0	1	100.0	1	$\chi 2$=1.03 P=0.31
	Cardiac diseases	15	51.7	14	48.3	29	DF=1
Menopause age	40-45 yrs	5	62.5	3	37.5	8	
	46-50 yrs	8	44.4	10	55.6	18	$\chi 2$=0.73 P=0.69
	51-55 yrs	2	50.0	2	50.0	4	DF=2
Under any treatment	Yes	1	50.0	1	50.0	2	$\chi 2$=0.00 P=1.00
	No	14	50.0%	14	50.0	28	DF=1

* significant at P≤0.05 ** highly significant at P≤0.01 *** very high significant at P≤0.001

Table shows the association between certain demographic variables and the level of symptoms reduction score .. statistical significance was calculated using chi square test. There is a statistical reduction among age, education and income status with the level of menopausal symptoms in post menopausal women.

Table 4.13: association between pretest level of symptom reduction score and women demographic variables(control)

demographic variables		level of symptoms reduction score					
		Below average (≤ 6.9)		Above average (> 6.9)			
		frequency	In %	frequency	in %	total	chi square test
Age	40 -45 years	3	75.0	1	25.0	4	
	46 -50 years	4	33.3	8	66.7	12	$\chi2$=2.64 P=0.45
	51 -55 years	5	55.6	4	44.4	9	DF=3
	56 -60 years	3	60.0	2	40.0	5	
Religion	Hindu	10	47.6	11	52.4	21	
	Muslim	2	40.0	3	60.0	5	$\chi2$=1.24 P=0.54
	Christian	3	75.0	1	25.0	4	DF=2
Education	Illiterate	4	66.7	2	33.3	6	
	Primary	7	38.9	11	61.1	18	$\chi2$=2.22 P=0.53
	Middle school	2	66.7	1	33.3	3	DF=3
	High school and above	2	66.7	1	33.3	3	
Occupation	Home maker	9	40.9	13	59.1	22	
	Govt employment	3	100.0			3	$\chi2$=4.06 P=0.25
	Private employment	2	66.7	1	33.3	3	DF=3
	Self employment	1	50.0	1	50.0	2	
Income	Rs.3000-5000	1	33.3	2	66.7	3	
	Rs 5000-10000	2	66.7	1	33.3	3	$\chi2$=0.66 P=0.88
	> Rs.10000	10	50.0	10	50.0	20	DF=3
	< Rs.3000	2	50.0	2	50.0	4	
Dietary habits	Vegetarian	2	66.7	1	33.3	3	$\chi2$=0.37 P=0.54
	Non Vegetarian	13	48.1	14	51.9	27	DF=1
Marital status	Married	12	60.0	8	40.0	20	
	Unmarried	1	100.0	0	0.0	1	$\chi2$=4.57 P=0.10
	Widow	2	22.2	7	77.8	9	DF=2
No. of children	One	9	69.2	4	30.8	13	
	Two	4	33.3	8	66.7	12	$\chi2$=3.45 P=0.17
	> Two	2	40.0	3	60.0	5	DF=2
Medical illness	Asthma	0	0.0	0	0.0	0	$\chi2$=0.00 P=1.00
	Cardiac diseases	15	50.0	15	50.0	30	DF=1
Menopause age	40-45 yrs	5	45.5	6	54.5	11	
	46-50 yrs	7	58.3	5	41.7	12	$\chi2$=0.56 P=0.75
	51-55 yrs	3	42.9	4	57.1	7	DF=2
Under any treatment	Yes	4	80.0	1	20.0	5	$\chi2$=2.16 P=0.14
	No	11	44.0	14	56.0	25	DF=1

* significant at P≤0.05 ** highly significant at P≤0.01 *** very high significant at P≤0.001

Table no 13 shows the association between level of symptoms reduction score and their demographic variables. None of the variables are significant. statistical significance was calculated using chi square tests

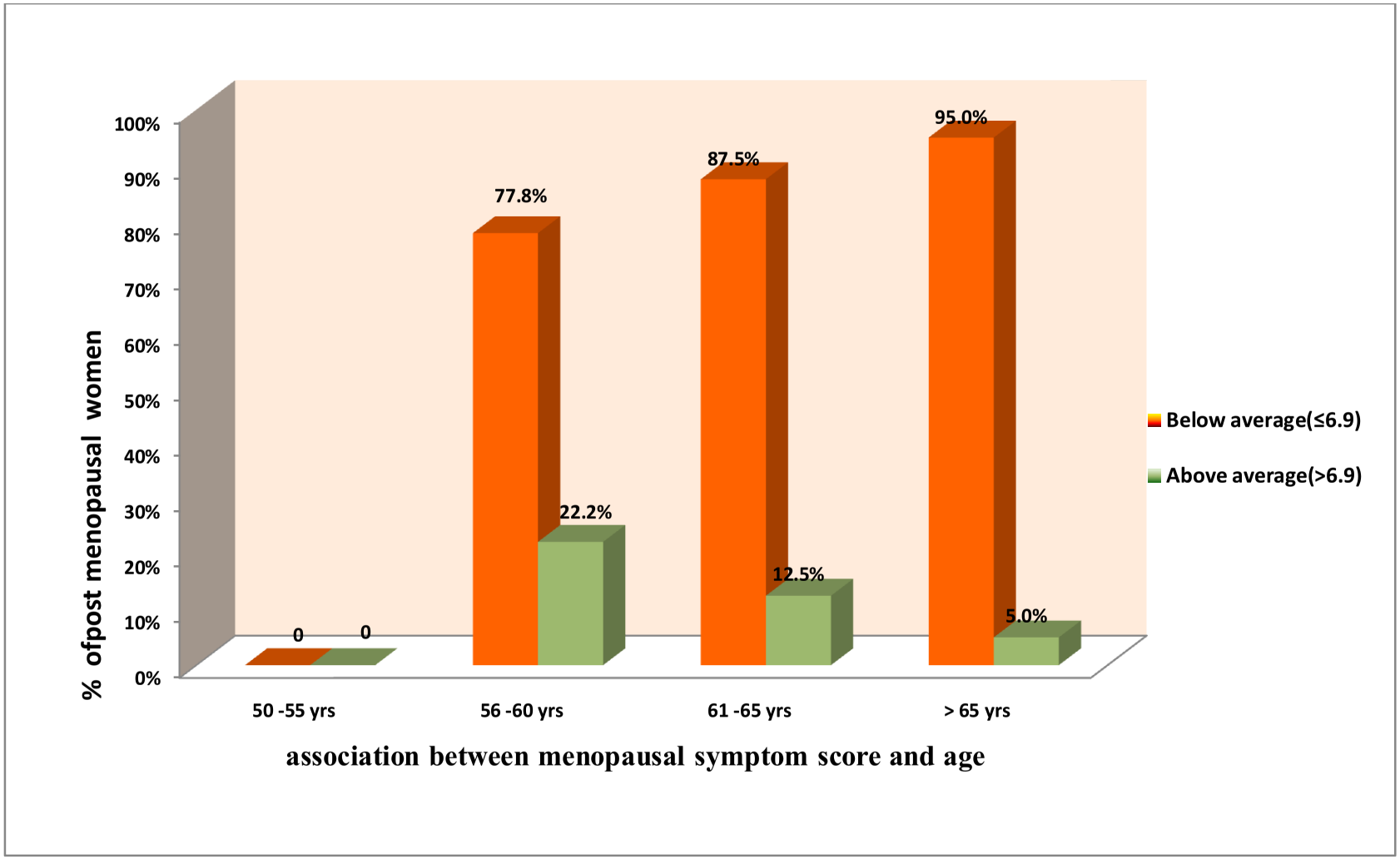


Figure 4.16: association between the level of menopausal symptoms reduction score and women age

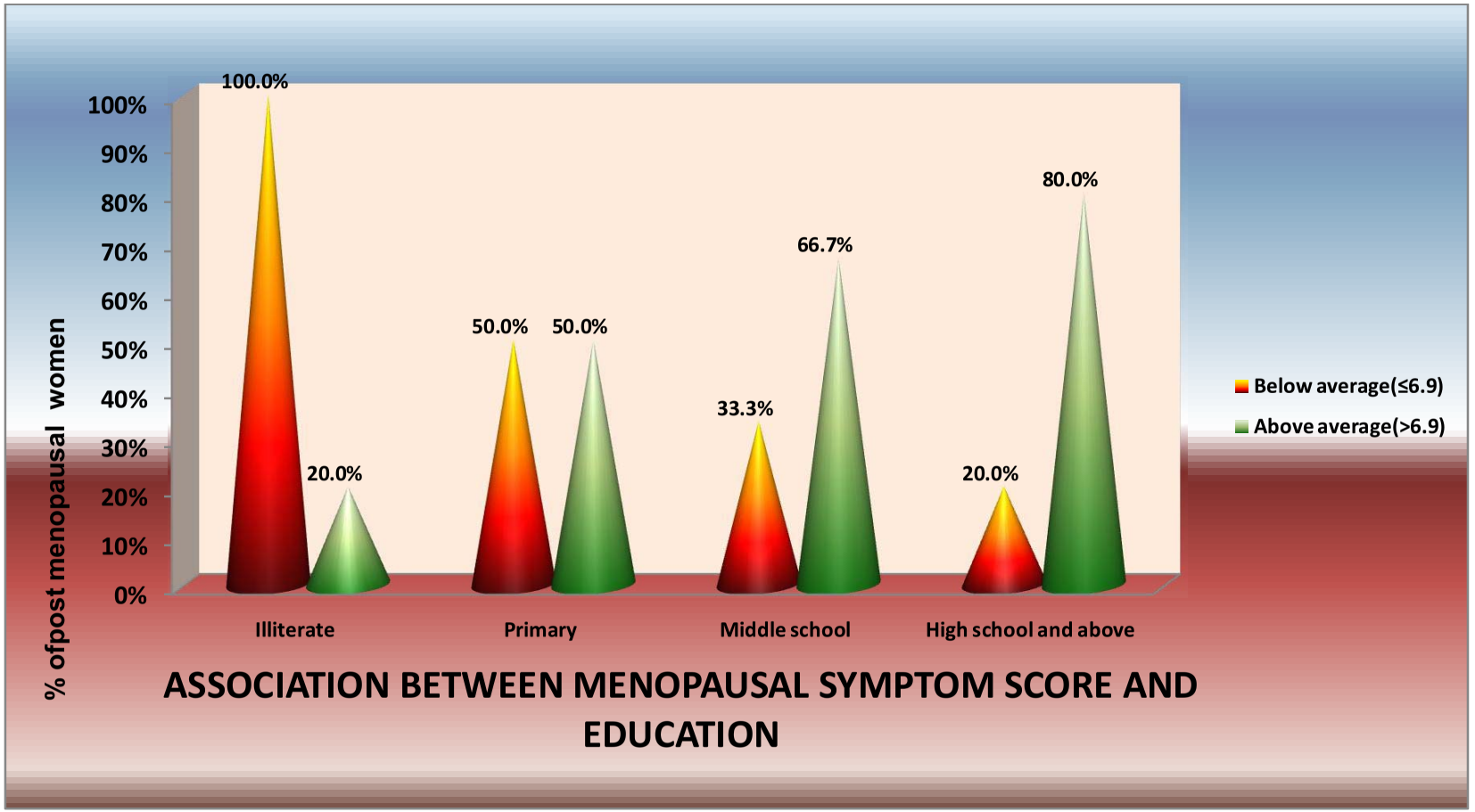


Figure 4.17. association between the level of menopausal symptoms reduction score and educational level.

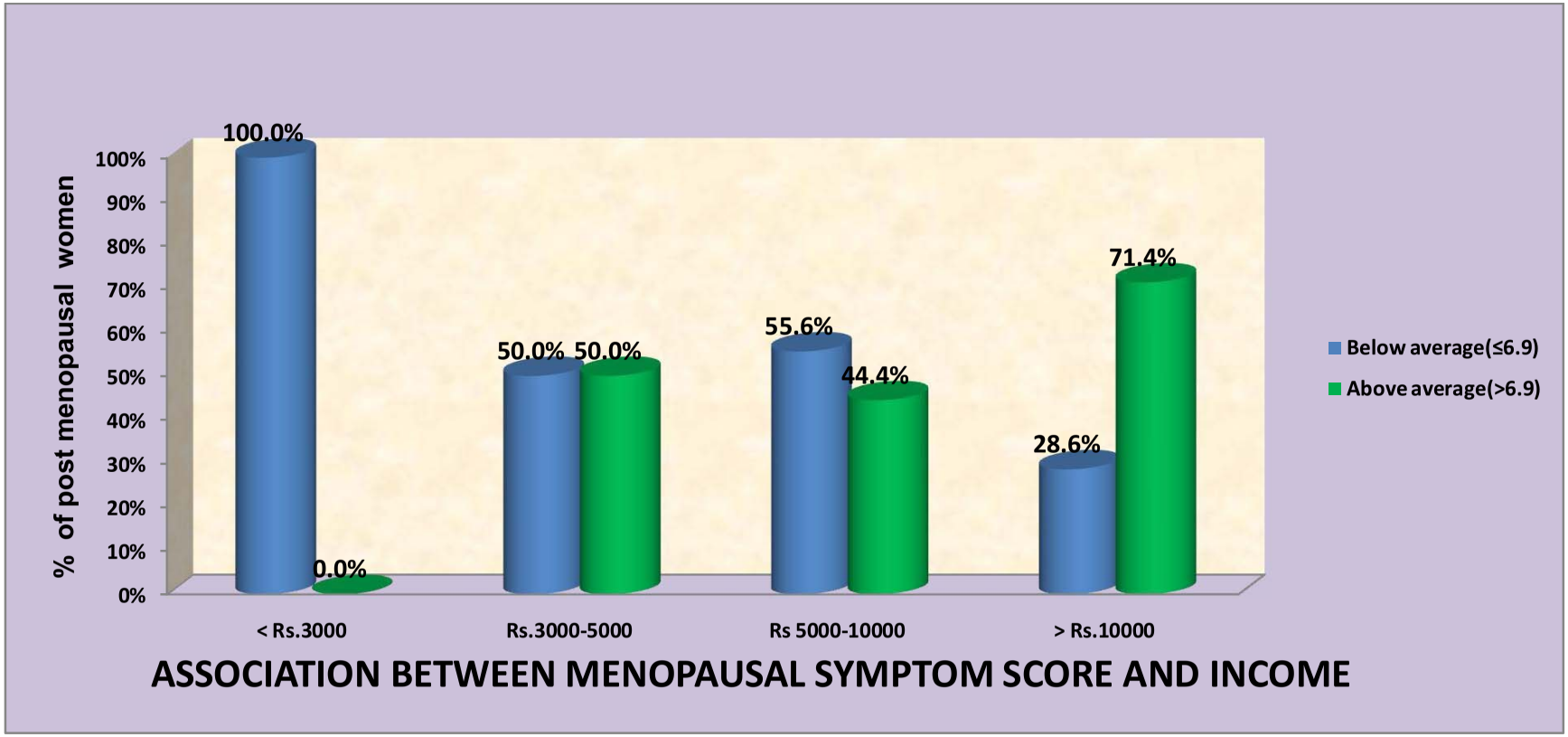


Figure 4.18. association between the level of menopausal symptoms reduction score and monthly income

CHAPTER V

SUMMARY OF RESULTS

The aim of our present study was to evaluate the effectiveness of soya milk in reducing the post menopausal symptoms. The study was conducted using quasi experimental research design.

Distribution Of Demographic Variable:

Demographic variables of control and experimental group of menopausal women

Among the study participants,

Age: In experimental group 2(6.7%) women were with in the age group of 40-45 years, 11(36.7%) were between 46-50 years, 14(46.6%) were within 51-55 years and 3(10.0%) were within 56-60 years respectively. In control group,4(13.3%) were with in age group of 40-45 years, 12(40.0%) were with in 46-55 years, 9(30.0%) were within 56-60 years.

In experimental group, regarding to **religious status** majority of them 14(46.7%) and in control group 21(70.0%) belongs to Hindu.

In experimental group in regard to **educational status** , majority of samples are primarily educated 14(46.7%) and in control group also 18(60.0%) studied only till primary education.

In regard to **occupation,** most of them in experimental group 20(66.7%) and in control group 22(73.3%) were home maker.

Regarding **income**, 14(46..7%) in experimental group and 20(66.7%) in control group earns a monthly income of above 10,000 only, and they all belongs to a middle class family.

Regarding **diertary pattern** , in experimental group, 26(86.7%) and in control group 27(90.0%) are non vegetarians.

In experimental group, 19 63.4% were **married**, and 20 66.7% in control group were married.

In experimental group, majority of women 15(50.0%) have 2 children and in control group 13(43.3%) were majority with only 1 children.

About 29(96.0%) in experimental group and 30(100.0%) in control group have other type of **illnes**s like asthma or diabetes or hypertension.

Regarding **menopausal attainment age**, 18(60.0%) in experimental group and 12(40.0%) were under the age group 46-55years.

About 28(93.3%) in experimental group and 25(83.3%) in control group were under no **treatment**.

Majority of the women were home makers hence they were approached by community health nurse during her home visit. She should educate about the symptoms and reduction measures such as exercise, dietary modification including supplementation of soya. In contrast with the hormonal replacement therapy natural remedies are cost effective and free of adverse effects. Hence the nurse has to motivate the family members to support menopausal women to adapt menopausal changes during their menopausal period the family members to support menopausal women to adapt menopausal changes during their menopausal period.

5.1 Major Findings Of The Study:

1. The pre assessment mean value of postmenopausal symptom score for experimental group is 17.17 and in control group is 16.67.
2. The post assessment mean value of post menopausal score for experimental group 10.27 and in control group score 15.50 respectively.
3. The level of pre menopausal symptoms in experimental group is 26.7% with mild postmenopausal symptoms 73.3% had moderate symptoms.

4. The level of pre assessment post menopausal symptoms score in control group was 33.3% of women had mild post menopausal symptoms and 66.7% had moderate symptoms.
5. The level of post assessment post menopausal symptom in experimental group, 83.3% of the women had mild post menopausal symptom and 16.6% had moderate post menopausal symptoms.
6. The level of post assessment post menopausal symptom in control group was 40.0% of the women had mild menopausal symptoms and 60.0%are had moderate symptoms.
7. The obtained‘t’ value of comparison of pre assessment postmenopausal symptoms scores for experimental and control group was 0.66 respectively.
8. The obtained‘t’ value of comparison of the post t-test post menopausal symptom core for experimental and control group was 6.52 respectively.
9. In experimental group, the reduction score in effectiveness of soya bean consumption was 23.0 and in control group it had been increased as 3...9% problem free.
10. Thus, the net benefit of this study in the effectiveness of the soya bean consumption in reducing the menopausal symptoms was 23.0%.

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CHAPTER VI

DISCUSSION

This study is discussed as follows,

The objectives of this includes,

To assess the pre test level of menopausal symptoms among postmenopausal women in experimental group and control group.

To assess the post test level of menopausal symptoms among postmenopausal women in control group and experimental group.

To evaluate the effectiveness of soya milk on menopausal symptoms among postmenopausal women in experimental group.

To associate the menopausal symptoms among post menopausal women and their selected demographic variables

Prevalence of menopausal symptoms among menopausal women

As In 2025, India will reach 165 millions. More than 12% of population will be above 60 yrs of age, almost 50% of these will be women, a staggering population in menopausal & post menopausal age, and 70% of these populations in Rural India. In our country the health programmes concentrate only the reproductive age group women; the menopausal age is neglected by all. There is great need to survey and identify the post menopausal women in our population which will help to formulate policies and programmers targeting them.

Objective 1: To assess the pre test level of menopausal symptoms among postmenopausal women in experimental group and control group

Each domain wise pretest percentage of menopausal symptoms scores. Was assessed. In experiment, maximum score is hot flushes (73.3%) and minimum score is vaginal dryness (31.0%). Among control group, is the maximum score is hot flushes (74.3%) and minimum score is vaginal dryness (30.0%).

Pre-test level of menopausal symptoms among postmenopausal women in experimental group and control group was assessed. In experimental group, pretest mild level symptoms are (26.7%), moderate symptoms (73.3%), whereas in control group, pretest mild level symptoms are (33.3%), moderate symptoms (66.7%). The chi-square value is 2.33 p=0.05.Statistically there is no significant difference between experiment and control group.

Thus the difference is too small and it is not statistically significant. Thus higher proportion in experimental group experience menopausal symptoms.

The above findings are evident with the **Kondagunta Nagaraj et al, (2014)** , he conducted a population based cross sectional study on prevalence of menopausal symptoms in Mumbai among 500 women age of 40-56 years the study finding reports that over 64% menopausal women of 37.4% muscular and joint pain, 35.6% fatigue, the other symptoms reported were19.4% hot flush, 18.6% sweating, 20.6% insomnia, 13.8%,headache and 7.6% of urogenital problems. The study concluded that higher proportion of menopausal women suffers from other complaints. The difference between the two groups is too small and thus not significant.

Objective 2: To assess the post test level of menopausal symptoms among postmenopausal women in control group and experimental group.

Each domain wise pretest percentage of menopausal symptoms score has been assessed. In experiment, maximum score is hot flushes (47.7%) and minimum score is vaginal dryness (19.0%). Among control group, is the maximum score is hot flushes (70.0%) and minimum score is vaginal dryness (26.7%).

Post test level of menopausal symptoms among postmenopausal women in experimental group and control group were assessed. In posttest, among experiment, 83.3% of the women are having mild level of symptoms, 16.7% of them are having moderate level of symptoms and none of them are having severe symptoms. Among control, 40.0% of the women are having mild level of symptoms, 60.0% of them are having moderate level of symptoms and none of them are having severe symptoms. Statistically there is a significant difference between experiment and control group. It was confirmed using chi square test. (11.91, p=0.0001).

Thus the level of menopausal symptoms had reduced from moderate tomild level through my intervention.

The Result was supported by **Silvina Levis* and Marcio L. Griebeler(2010)** where in this study,The limitations of these studies include small sample size, short duration, the use of different soy foods that contain varying amounts of isoflavones, and enrollment of women in a wide age range or who differed in the number and severity of menopausal symptoms. Studies evaluating vasomotor symptoms commonly observe a significant placebo effect, with up to 30% reduction in hot flashes in the post test experimental group; therefore, trials longer than 12 wk are necessary to evaluate the sustainability of effects.

Objective3: To evaluate the effectiveness of soya milk on menopausal symptoms among postmenopausal women in experimental group.

On comparison of pretest and posttest mean menopausal symptom score (experiment), all the symptoms like hot flushes, sleep disturbances, night sweats, fatigue ,headache, irritability, joint discomfort, palpitation are very highly significant when compared with vaginal dryness and palpitation. Whereas in control group none of the symptoms were significant.

Finally on comparing, pretest and posttest menopausal symptoms among postmenopausal women, in experiment, in pretest women are having 17.17 score and in posttest, they are having 10.27 score. Difference is 6.90 score. The difference between pretest and posttest score is large and it is statistically significant. Differences between pretest and posttest score was analyzed using Student paired-test.

Considering control group in pretest women are having 16.67 score and in posttest, they are having 15.50 score. Difference is 1.17 score. The difference between pretest and posttest score is small and it is not statistically significant. Differences between pretest and posttest score was analyzed using Student paired t-test.

On comparing pretest and posttest in menopausal symptoms among postmenopausal women, in experiment, in pretest women are having 17.17 score and in posttest, they are having 10.27 score. Difference is 6.90 score. The difference between pretest and posttest score is large and it is statistically significant. Differences between pretest and posttest score was analyzed using Student paired-test.

Considering control group in pretest women are having 16.67 score and in posttest, they are having 15.50 score. Difference is 1.17 score. The difference between pretest and posttest score is small and it is not statistically significant. Differences between pretest and posttest score was analyzed using Student paired t-test.

Differences between reassessment and post assessment score was analyze using the

mean difference and the proportion with 95% confidence interval is 6.90 (p=0.001 significant) in experimental group and in control group is 1.17(p=0.10 not significant).

On comparing the symptoms in experimental and control group, the mean difference between the experimental and control group in the post test level is 5.23(mean=15.50, SD=3, 35).The difference between experiment and control score is large and it is statistically significant. Differences between experiment and control score was analyzed using Student independent t-test (t=6.52, p=0.001-significant). This shows the effectiveness of soya intervention.

The above findings consistent with quasi experimental study conducted by **Maya.c.koshy (2012)** to assess the effectiveness of soyabeans on menopausal symptoms among 60 post menopausal women in salem district. Data was collected using modified Greene climacteric scale. The mean post test menopausal problem 4.37 was less than the mean pre test 24.93.the obtained "t" value=32.833, ($p<0.05$) was highly significant. It was concluded that significant reduction in the mean menopausal problem after soya bean administration.

Objective 4: To associate the menopausal symptoms among post menopausal women and their selected demographic variables

On associating the pre test and post test level of post menopausal symptom reduction score and demographic variables in experimental group ,Elder , more educated and more income women are having more symptoms reduction score than others. Statistical significance was calculated using chi square test(Age x2=8.17, p=0.05, education x2=7.49, p=0.05, income x2=7.70, p=0.05)

In control group, None of the variables are significant. statistical significance was calculated using chi square test

The above findings are considered with the **J.josephine (2010)** conducted an experimental study to evaluate the effectiveness of soya bean on menopausal problems in Madurai. The study results that in experimental group, the mean post assessment

status of the selected menopausal problems 13.5 is lower than the mean preassessment status 18.3, the mean difference is 4.53 and the obtained “t” value 12.58 is significant at 0.05 levels. The study concluded that there is a typical reduction in the level of menopausal symptoms after administration of soya bean.

Through this study more than 75% of postmenopausal women in Choolai were benefited.

Hypotheses :

H1: There is a significant effect in the reduction of level of physicsl and physiological symptoms among the post menopausal women after soya milk with honey consumption.

The net reduction rate of menopausal symptoms among the post menopausal women was 23.0%.($p \leq o.oo1$), there is statistically significant improvement on overall domains except for vaginal dryness and palpitation. This proves the effectiveness of soya milk with honey consumption on reducing the physical and physiological symptoms on post menopausal women. Hence the hypotheses was proved..

H2:

There is a significant association between the reduction level of menopausal symptoms among postmenopausal women and their selected demographic variables.

The assocation of age, education, income with reduction in the physical and physiological symptoms is statistically significant with $p \leq 0.05$. respectively. Thus certain demographic variables are associated in the reduction level of symptoms. Hence hypotheses was accepted

CHAPTER VII

CONCLUSION AND RECOMMENDATIONS

The brain of the research project lies in reporting the findings. This is the most Creative and demanding part of this study. This chapter gives the brief account of Present study, suggestion of the study and nursing implication. This study was intended to analyze the effectiveness of soya milk administration upon menopausal symptoms among menopausal women

7.1 Implications:

(Tolsma 1995), the findings of the study have the following implications in the areas of nursing service, nursing education, nursing administration, and research.

Home based treatment to reduce the post menopausal symptoms must be taught to combat these symptoms naturally in the community and the Community Health Nurse must hold high responsibility in creating awareness among the people regarding this complimentary alternative medicines.

7.1.1 Nursing Service

It was identified during survey in Choolai village that many women at menopausal age were experiencing post menopausal symptoms. Basically it is being neglected by the women and not told out. So the community health nurse needs to give more importance to the women in menopausal age and the use of soya milk as natural remedy to reduce postmenopausal symptoms. In hospital, women who underwent hysterectomy (surgical menopause) were not aware of menopause, they only consider the surgery. Nurses in the surgical units need to educate about menopause to those who underwent hysterectomy while discharging the patient. And supportive advice has to be given with regard to

following dietary modification (consuming cabbage, beans, and soya) to reduce menopausal symptoms.

7.1.2 Nursing Education:

Menopause and its related issues should be a part of curriculum in subjects such as, community health nursing. Nursing students should be educated them about natural remedies and alternative and complementary therapies for menopause as they take care of the women who undergo surgical hysterectomy. Nursing education must emphasize primary care approach focusing on preventive care. Students can be motivated to conduct mass awareness programs on post menopause and its symptoms and management. The emphasis need to be a preventive and promotive health practices. Thus nurse's knowledge must be upgraded regarding the clinical focus on periodical screening programmes in the community level to promote healthier life for the women.

7.1.3 Nursing administeration:

1. The administrator has the added responsibility in providing the continuing education opportunities on the alternative therapy to the nurses in today's world of advanced technology. Nurse administrator should take initiative to organize continuing education programs on management of menopausal symptoms with supportive treatments like soya milk supplementation for the nursing personnel in the hospital and in the community setting with modern technological visual aids to enhance knowledge regarding non pharmacological ways of reducing menopausal symptoms. A study protocol for the implementation of the procedure must be developed. Nurse administrators must take interest in formulating the principles and adapting the various modalities of treatment for the post menopausal symptoms. Nurses must explore their knowledge regarding the health education programmes with teaching materials with new innovative ideas. Periodic conference, seminar,

symposium can be arranged for Nursing personnel regarding the care of menopausal clients and the new findings regarding their care.

7.1.4 Nursing research:

As a result of growing demand, there is a heightened urgency to expand the evidence based support in use. It opens the big avenue for research on innovative, alternative methods to reduce the menopausal symptoms .Further research need to be conducted to help the menopausal women to come out from their menopausal symptoms. The professional nurses could conduct further studies on the impact of various alternative methods for treating the menopausal symptoms as well as to avoid the use of hormone replacement therapy and its side effects. The study findings helps to expand the scientific body of professional knowledge for further researchers to build up evidence based practice.

7.2 Limitation:

- Prolonged effect of soya beans could not be measured.
- The investigator needed much co operation from the menopausal women.

7.3 Recommendations:

The research recommends the following studies in the field of nursing research:-

- The same study could be conducted on larger sample for better generalization.
- A similar study can be done with other type of soya products.
- Effectiveness of this soya milk can be compared with other complimentary products.
- A similar study can be done in various settings.

- Effectiveness of soya milk can be compared with the other hormonal replacement therapies.

Conclusion:

The findings of the study showed that the effectiveness of soya milk upon Post menopausal symptoms in experimental group were better than those in the control group. Hence it could be concluded that there is an association between the post menopausal symptoms and administration of soya milk. Soya milk is easy to administer and a natural supplement for menopausal women, which can also be prepared at home and consumed.

References

1. Albertazzi P et al, (2009) The effect of dietary soy supplementation on hot flushes, *Journal Of Obstetrics And Gynecolology*, Oct;98(4):702.
2. Allender, A. (2010). *Women's health. Community Health Nursing*, (7thed), Lippin cot, 662 – 663.
3. Aparna, K. & Poshadri A. (2011). *Soya bean – A health food. Health Action*, 10 (9), 29- 30.
4. Basavanthappa .BT (2009) *nursing theories*, second edition. NewDelhi, jaypee brothers.
5. Begum, M. (2010). Text book of *foods nutrition & dietics*, (3rded). New Delhi, Sterling, 34-35
6. Coplin S. Using soy in every day meals. *Journal OfNutraceuticals*. Functional and Medical Foods. 2000;2(4):65-70.
7. Dutta DC (2005), *Textbook of Gynaecology*, sixth edition, culcutta. New central book agency pvt limited.
8. Ferrari A. '*Soy extract phytoestrogens with high dose of isoflavones for menopausal symptoms*.' [abstract] 2009 Dec [cited 2013 Jan 3]; 35(6):"
9. Ishiwata N et al (2009),*Newequol supplement for relieving menopausal symptoms*: randomized, placebo-controlled trial of Japanese women. Journal Of Graduate Medical Education In Obstetrics, Jan-Feb;16(1):141-8.
10. K. Geeta,(2010), Soy and Calcium Supplementation Reduces Postmenopausal Problems, *Journal Of Ethno Med*, 7(2): 101-107 .
11. Lowdermilk, L. & Perry, L. (2000). *Menopause. Maternity Nursing,* (8thed), Mosby, 441-442.
12. ManinderKaur andInduTalwar (2009) , *Age at Natural Menopause* among Rural and Urban Punjabi Brahmin Females, International Journal Of Contemporary And Applied Studies Of Man ,11(4): 255-258.

13. Mahajan, B. (2010). *Methods in Biostatistics*. St. Louis: Jaypee Brothers Medical Publishers.
14. Nancy Burns, et.al☹2005).*The practice of nursing research Fifth* edition .Philadelphia: Elsevier publications.
15. Melby, (2009). Soyabean supplement for relieving menopausal symptoms. *Journal Of Food And Nutrition*. 2(2), 18-20.
16. Park, K. (2011) *Text book of preventive and social medicine,* (21sted)Jabalpur,
17. Park, J. E., & Park, K. (1991). Park's *Textbook of Preventive and Social Medicine* (13th Ed.). Jabalpur: Banarsidas Banat
18. Pinkerton, J. V., Stovall, D. W., & Kightlinger, R. S. (2009). Advances in the treatment of menopausal symptoms. *Women's Health*, 5(4), 361-384.
19. Phani, K. et al. (2009). *Effects Of soy protein isolate on bone mineral* density and physical performance Indices in post menopausal women.
20. Polit, F. & Beck, T. (2010). *Nursing Research*, generating and assessing evidence for nursing practice, (8thEd). New Delhi: Lippincott Williams and Wilkins.
21. Polit, F. & Beck, T. (2010). *Nursing Research*, generating and assessing evidence for nursing practice, (8thEd). New Delhi: Lippincott Williams and Wilkins. .
22. Radhakrishnan G, Rashmi, Agarwal N, Vaid NB(2008),Evaluation of isoflavone rich soy protein supplementation for postmenopausal therapy. Pakistan *Journal Of Nutrition*, 8(7): 1009-1017.
23. Sarah, (2006). Effective of alternative therapies on postmenopausal women. *Journal Of Food And Nutrition.* (3),27-23.
24. Somekawa Y et al (2007),Soy intake related to menopausal symptoms, serum lipids, and bone mineral density in postmenopausal Japanese women, *Journal Of Obstetrics And Gynecology, Jan;97(1):109-15.*

25. *Soules MR, Sherman S, Parrott E, et al*. Executive summary: stages of reproductive aging workshop (STRAW) Park City, Utah, July 2001. Menopause 2001; 8:402-407.
26. Swaminathan M. (2000).*Essential of food and nutrition* .Bappco publisher.

27. JOURNAL REFERENCES
28. Aaron, R. & Muliyil, J. (2002). *Medical social dimensions of menopause*. National Medical Journal of India, 15(1), 14-17.
29. **Aedin Cassidy**et al., *School of Medicine*, Health Policy and Practice, University of East Anglia, Norwich NR4 7TJ, UK Centre for Metabolic Bone Disease, Hull Royal Infirmary, Hull HU3 2RW, UKemail a.cassidy@uea.ac.uk
30. Anne Lethabyet al (2013) Menopause. Retrieved from http://www.menopause/ ims on 5/12/2011
31. *American Journal of Clinical Nutrition*, First published June 4, 2014, doi: 10.3945/ajcn.113.071464 AmJClinNutrJuly2014 vol. 100 no. Supplement 1 423S-430S
32. Cheng, Peng-Fei PhD[1]February 2015 - Volume 22 - Issue 2 - p 198–206doi: 10.1097/GME.0000000000000290
33. Centres for Disease Control and Prevention. National Hospital Discharge Survey. Available at: http://w w w.cdc.gov/nchs/nhds.htm. Accessed August 24, 2010.
34. Jeinkins, D. et al. (2007). Effectiveness of soy based breakfast cereal on blood lipid sand oxidized low density lipo protein. American J*ournal of Clinical Nutrition*, 200(49), 1496-5000.
35. Khalid Zaheer (2013) Reproduction and menopause, Indian Council of MenopauseSociety, 1(2), 23-24.
36. Kuna, A. & Poshadri, A. (2011). Soya bean – *A healthy food.* Health Action, 5 (6), 29 -30.

37. Leipert, G. & Reutter, L. (2005). Developing resilience's; how women maintain their health in northen geographically isolated setting, A Qualitative Research, 15(1), 49-65.
38. Liji, M. & Mathias, M. (2011). *Menopausal depression*. Prisms nursing practice, 6(3), 123-127.
39. Mansoreh Nourozi, et al, (2015)Measurement of Quality of Life of Survivors of Neonatal Intensive Care: Critique and Implications. Semin Perinatol . 2008;32:59–66.
40. Malik, S. (2004). Phytoestrogen and herbs*, Obstetrics & Gynecology Today*, 9 (11), 739-740.
41. Marian, M. et al, (2005). *The Effect of Education and Awareness on the Quality-of-Life in Postmenopausal Women,* Menopause, 10 (9). Retrieved from http//www.ims.org./ article on 12/1/2011.
42. Pinto, M. (2010). Menopausal problems and their management. *Nightingale Nursing Times*, 2 (3), 40-42.
43. Puri, P. et al. (2012). Perception of menopause. The *internet journal of family Practice,* 6(2), 15-17
44. Shah, S. and Agarwal, S. (2006). Evaluate the effects of a herbo mineral phytoestrogen formulation containing soy isoflavones in Indian women with signs and symptoms of menopause, Menopause.48 (3). Retrieved from http;//www.menopause/ ims on 5/12/2011.
45. Shah, R. (2004). Menopausal symptoms in urban Indian women, *Obstetrics & Gynecology* Today, 9(10), 667-670.

Net Reference:

- http://archinte.jamanetwork.com/article.aspx?articleid=410719
- www.google search.com
- www.search.proquest.login
- www.pubmed.com
- www.medline plus.com
- www.google scholar.com

- http://ircmj.com/?page=article&article_id=1809
- http://journals.lww.com/jwhpt/Abstract/2009/33030/Perception_of_Quality_of_Life_During_the_Menopause.2.aspx.
- http://www.apmf2010.com/.../Indian%20menopause%20society%20program.pdf
- http://www.medscape.org/viewarticle
- http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3059875/
- http://www.ncbi.nlm.nih.gov/pubmed/22164810
- http://www.onlinelibrary. wiley.com/doi/10.1111/j.1444-1683.2003.../full

Data Collection Tool

Section-I

Demographic variable performa

Purpose:

This Performa is used to measure the demographic variable such as age, sex, education, occupation, religion, monthly income, number of the year, in areas of choolai .

RESEARCH TOOLS

INSTRUCTION:

- Please be frank and free in answering the question.
- Read each item carefully and answer all the questions.
- Answers will be used only for research purpose and will be confidential.
- Please put a tic mark at the appropriate option.

Section-A Demographic Profile

1. Age

a. 40-45yrs [ ]

b .46-50yrs [ ]

c. 51-55yrs [ ]

d. 56-60yrs [ ]

2. Religion

a. Hindu [ ]

b .Muslim [ ]

c. Christian [ ]

d. Others [ ]

3. Educational status

a. no formal education [ ]

b.primary [ ]

C. middle school [ ]

d.high school and above [ ]

4. Occupation

a. Home maker [ ]

b. Govt employment [ ]

C. private employment [ ]

D. self employment [ ]

5. Monthly family income

a. 3000-5000 [ ]

b. Rs 5000-10000 [ ]

c. Rs above 10000 [ ]

d. Below 3000 [ ]

6. Dietary habits

a. Vegetarian [ ]

b. Non vegetarian [ ]

7. Marital status

a. married [ ]

b. unmarried [ ]

c .widow [ ]

d. divorce [ ]

8. How many children do you have?

a. 1 [ ]

b. 2 [ ]

C. > 2 [ ]

d. 0 [ ]

9. Do you have any medical illness?

a. Blood pressure [ ]

b.diabetes Mellitus [ ]

c. Asthma [ ]

d. other diseases [ ]

10. Menopause attained at the age of?

a. 40-45 yrs [ ]

b. 46-50 yrs [ ]

c. 51-55yrs [ ]

d. 60 above [ ]

11. Whether or taken treatment for menopause?

a. yes [ ]

b. No [ ]

வினாத்தாள்

புள்ளி விபர ஆய்வு மாற்றுரு

மாதிரி எண்: **பெயர்:** **விலாசம்**

1. வயது (வருடங்களில்) :

அ. 40-45 [ ]

ஆ. 46-50 [ ]

இ. 51-55 [ ]

ஈ. 56-60 [ ]

2. மதம்

அ. இந்து [ ]

ஆ. முஸ்லீம் [ ]

இ. கிருஸ்துவர் [ ]

ஈ. வேறு மதத்தவர் [ ]

3.கல்வித் தகுதி:

அ.படிக்காதவர் [ ]

ஆ. ஆரம்பக்கல்வி [ ]

இ.நடுநிலைக் கல்வி [ ]

ஈ. உயர்நிலைக் கல்வி [ ]

4. தொழில்

அ. இல்லத்தரசி [ ]

ஆ.அரசு பணி [ ]

இ. தனியார் பணி [ ]

ஈ. சுய தொழில் [ ]

5. மாதாந்திர குடும்ப வருமானம் ரூபாயில்

அ.<ரூ.3000-5000 [ ]

ஆ.ரூ.5000-10000 [ ]

இ.ரூ >.10000ஈ.ரூ.<3000 [ ]

6.உணவு முறை

அ.சைவ உணவு [ ]

ஆ.அசைவு உணவு [ ]

7.திருமண நிலை

அ. திருமணமானவர் [ ]

ஆ திருமணமாகாதவர் [ ]

இ. விதவை [ ]

ஈ.விவாகரத்தானவர் [ ]

8.உங்களுக்கு எத்தனை குழந்தைகள் உள்ளனர்?

அ. 1 [ ]

ஆ. 2 [ ]

இ. >2 [ ]

ஈ. இல்லை [ ]

9 . உங்களுக்கு வேறு ஏதெனும் நோய் உள்ளதா?

அ. உயர் ரத்த அழுத்தம் [ ]

ஆ.சர்கரை நோய்இ. ஆஸ்த்துமா [ ]

ஈ. இல்லை [ ]

10. மாதவிடாய் எந்த வயதில் அடைந்தீர்கள்

ஆ. 40-45 வயது [ ]

ஆ. 46-50 வயது [ ]

இ. 51-56 வயது [ ]

ஈ.> 60 [ ]

11. நீங்கள் மாதவிடாய் சம்மந்தமான நோய்களுக்கு மருந்து ஏதெனும் எடுக்குறீர்களா?

அ. ஆம்

ஆ. இல்லை

S.NO	MENOPAUSAL PROBLEMS	3 FREQUENTLY (DAILY)	2 OCCASIONALLY (TWICE OR THRICE IN A WEEK)	1 RARELY (ONCE IN A WEEK)	0 NEVER
	How often do you experience				
1.	Hot Flushes ?				
2.	Sleep disturbances ?				
3.	Night sweats ?				
4.	Fatigue ?				
5.	Vaginal dryness ?				
6.	Headache?				
7.	Irritability ?				
8.	Joint and muscular discomfort?				
9.	Breast tenderness ?				
10.	Palpitation/ heart discomfort?				

MODIFIED MENOPAUSAL SYMPTOM SCALE

SCORE

0	→	0%	→	No symptoms
1	→	1% -50%	→	Mild
2	→	51 %-76%	→	Moderate
3	→	76%-100%	→	Severe

Soya milk preparation :

The soya bean (Glycine max) belongs to the legume family. Legumes features phyto nutrients that lend some unique benefits to women in their menopauasal and post menopausal stages. These soy products are highly rich in isoflavones , the most widely studied class of phyto nutrients.the message that soy phytoestrogens act, in effect, as surrogate estrogens. Each gram of soya protein in soya beans and traditional soya foods provides approximately 3.5mg of isoflavones.

PURPOSES:

- SOY products are good source of protein and has been consumed by asian populations.
- The effects of soy isoflavones observed on physical and physiological symptoms helps to rduce hot flashes, night sweats etc…
- soy phytoestrogens do have the estrogenic effect of stimulating the growth of breast cancer cells in tissue cultures.
- 50 gms of soya contains;

✓ Phytooestrogens-20mg

✓ Energy-223k.cal.

✓ Carbohydrates-10.45gm

✓ Dietary fibre-5gm

✓ Fat-9.75gm

✓ Proteins-21.6gm

✓ Vitamin A-1moq,vitamin B-0.133mg,vitamin C-3mg

✓ Vitamin K-2.7mg , Calcium-120mg, magnesium-140mg.

Procedure:

Soak 50 gm of soya bean in water the previous night. The next day morning pour 100ml of water and blend thoroughly using mixie.The extract of 100ml of soya milk should be taken by filtering it in a cheese cloth.The obtained extract must be boiled for a while(10min) .After it is cooled, about a teaspoon-5ml of honey should bw added for flavor and must be administered.

INFORMATION TO PARTICIPANTS

Title of the study :

A study to assess the effectiveness of soya milk consumption on reducing physical and physiological symptoms among the postmenopausal women in the age group 40-60 yrs in selected urban community at choolai

Name of the Participant :

Date :

Age/sex :

Investigator : V. Sangeetha

Name of the institution : urban community area, choolai

Enrollment No :

You are invited to take part in this study. The information in this document is meant to help you decide whether or not to take part. Please feel free to ask if you have any queries or concerns.

ஆய்வு தகவல் தாள்

“சோயா பால் உட்க்கொள்வதன் மூலம், இறுதி மாதவிடாய்க்கு பின் பெண்களுக்கு ஏற்படும் உடல் மற்றும் உடல் இயல் ரீதியான அறிகுறிகளை குறைகும்என்பதற்கான ஓர் திரணாய்வு “.

ஆய்வாளர்:: வீ.சங்கீதா

பங்கேற்பாளர்:

இந்த அய்வு சென்னை மாநகரம் சூளை நகரில் நடைபெற உள்ளது. நீங்களும் இந்த ஆய்வில் பங்கேற்க நாங்கள் விரும்புகிறோம். இதிலுள்ள தகவலின் அடிப்படையில் இந்த ஆய்வில் பங்கேற்பதா அல்லது வேண்டாமா என்று நீங்கள் முடிவு செய்து கொள்ளலாம். உங்களது சந்தேகங்களை எங்களிடம் கேட்டு நிவர்த்தி செய்து கொள்ளலாம்.

இந்த ஆய்வின் நோக்கம்:

சோயா என்ற ஒரு வகை தானியம் கொழுப்பு 19.5 (க்ராம்) , புரதம் 432(கி.கேல்) , மாவு சத்து 21 (க்ராம்) , வைட்டமின் மற்றும் தாது பொருட்கள் நிரைந்ததாகும். சோயாவின் ஓர் முக்கியமான "ஃப்ய்டொ ஈஸ்ட்ரோஜன்" என்ற சுரபி போன்ற வேதிப் பொருள் உள்ளது. இது நம் உடலில் குறையும் ஈஸ்ட்ரோஜன்ஐ சுரக்க உதவி செய்யும். அது மட்டும் அல்லாமல் "ஐசொஃப்லவொன்" என்ற வேதி பொருள் ஈஸ்ட்ரோஜன் போன்ற ஒத்ததன்மை உடையது. பெண்களுக்கு இறுதி மாதவிடாய்க்கு பின் தோன்றும் உடல் மற்று உடல் இயல் ரீதியான அறிகுறிகளை இந்த ஐசொஃப்லேவொன் குறைக்கிறது.ஒரு நாளைக்கு 50 க்ராம் சோயா புரதம் உட்கொள்வதன் மூலம் 120 க்ராம் சோயா ஈஸோஃப்லேவொன் நம் உடலில் கிடைக்கிறது. அடிபடையாக , ஒரு நாளைக்கு 80-160 மில்லி க்ராம் சோயா ஐஸோஃப்லேவொன் இருந்தால் மட்டுமே இறுதி மாதவிடாய்க்கு பின் ஏற்படும் உடல் மற்றும் உடல் இயல் ரீதியான அறிகுறிகளை குறைக்க முடியும்.

இந்த ஆய்விற்கு இன்ஸ்டிட்யூசனல் எத்திகல் கமிட்டி சம்மதம் பெற்றிருக்கிறோம்.

ஆய்வின் செயல் முறை

இந்த ஆய்வில் கலந்து கொள்பவர்க்ள் A மற்றும் B என்று இரு குழுக்களாக பிரிக்கபடுவீர்கள். A குழுவில் இருப்பவர்கள், எந்த வித சிகிச்சையும் பெறமாட்டார்கள், B குழுவில் இருப்பவர்களுக்கு தேனுடன் கலந்த

சோயா பால் அளிக்கபடும். இந்த ஆய்வில் முதல் மற்றும் 4 வார முடிவில் வினா தாள் மூலம் அறிகுறிகள் பரிசோதனை செய்யப்படும். ஏதெனும் பக்கவிளைவுகள் sssஏற்பட்டால் உடனடியாக எங்களிடம் தெரிவிக்க வேண்டும்.

ஆய்வினால் ஏற்படும் நன்மைகள்:

இந்த ஆய்வில் கலந்து கொள்வதன் மூலம் நீங்கள் நோயின் தன்மையில் முன்னேற்றம் பெறலாம். மேலும் வருங்க்காலத்தில் பிற நோயளிகளும் பயன் பெற இந்த ஆய்வு உதவியாக அமையும்.

மருத்துவ சிகிச்சையின் தகவல்கள் குறித்த விவரங்கள்:

உங்கள் மருத்துவ சிகிச்சை குறித்த தகவல்கள் ரகசிமாக பாதுகாக்கபடும் (பெயர், மருத்துவ பரிசோதனை முடிவு) இந்த தகவல் தாளில் கையெழுத்திடுவதன் மூலம் உங்களை பற்றிய குறிப்புகளோ , எடுத்து கொண்ட சிகிச்சை முறையை பற்றியோ ஆய்வாளரோ இன்ஸ்டிட்யூசன் எதிக்கல் கமிட்டியை sசார்ந்த்வர்களோ தேவைப்பட்டல் அறிந்து கொள்ளலாம் என்று சம்மதிக்கிறீர்கள். முடிவுகளை அல்லது கருத்துக்களை வெளியிடும் போதோ அல்லது ஆய்வின் போதோ தங்களது பெயரையோ அல்லது அடையல்ளங்களையோ வெளியிடமாட்டோம் என்பதையும் தெரிவித்து கொள்கிறோம்.

இந்த ஆய்வில் பங்கேற்காவிட்டாலும் நீங்கள் வழக்கமான சிகிச்சையை தொடர்ந்த்து பெறலாம் .

இந்த ஆய்வில் பங்கேற்பது தங்களுடைய விருப்பத்தின் பேரில் தான் இருக்கிறது. மேலும் நீங்கள் எந்நேரமும் இந்த ஆய்விலிருந்து பின் வாங்கலாம் என்பதையும் தெரிவித்து கொள்கிறோம்.

இந்த சிறப்பு சிகிச்சை முடிவுகளை ஆய்வின் போதோ ஆள்ளது ஆஅய்வின் முடிவின் போதோ தங்களுக்கு அறிவிப்போம் என்பதையும் தெரிவித்து கொள்கிறோம்.

ஆய்வாளர் கையொப்பம் s பங்கேற்பாளர்/ பாதுகாவலர் கையொப்பம்

தேதி:

CERTIFICATE FOR CONTENT VALIDITY

This is to certify that the tool constructed by Ms.Sangeetha. V. M.Sc. Nursing II year, College of Nursing, Madras Medical College which is to be used in her study titled **"A STUDY TO ASSESS THE EFFECTIVENESS OF SOYA MILK WITH HONEY CONSUMPTION ON REDUCING PHYSICAL AND PHYSIOLOGICAL SYMPTOMS AMONG THE POST -MENOPAUSAL WOMEN WITH IN AGE GROUP 40-60 YEARS AT CHOOLAI"** has been validated by the undersigned. The suggestions and modifications given by me will be incorporated by the investigator in concern with their respective guide. Then she can proceed to do the research.

V. Ebigulda

SIGNATURE WITH SEAL

NAME : EBI GULDA MARY-V

DESIGNATION: READER

COLLEGE : MADHA COLLEGE OF NURSING

MADHA COLLEGE OF NURSING
15 JUL 2015
CHENNAI - 600 069

PLACE: KUNRATHUR

DATE: 15-07-2015

INSTITUTIONAL ETHICS COMMITTEE
MADRAS MEDICAL COLLEGE, CHENNAI-3

EC Reg No.ECR/270/Inst./TN/2013
Telephone No. 044 25305301
Fax : 044 25363970

CERTIFICATE OF APPROVAL

To
Ms. V. SANGEETHA
M.Sc., (Nursing)
College of Nursing
Madras Medical College,
Chennai – 600 003.

Dear Ms. V. SANGEETHA,

The Institutional Ethics Committee has considered your request and approved your study titled **A STUDY TO ASSESS THE EFFECTIVENESS OF SOYAMILK WITH HONEY CONSUMPTION ON REDUCING PHYSICAL AND PHYSIOLOGIAL SYMPTOMS AMONG THE POST MENOPAUSAL WOMEN WITH IN AGE GROUP 40-60 YRS AT CHOOLAI. No.20102014.**

The following members of Ethics Committee were present in the meeting held on 21.10.2014 conducted at Madras Medical College, Chennai-3.

1. Dr.C.Rajendran, M.D.,	: Chairperson
2. Dr.R.Vimala, M.D., Dean, MMC, Ch-3	: Deputy Chairperson
3. Prof.B.Kalaiselvi, M.D., Vice-Principal, MMC, Ch-3	: Member Secretary
4. Prof.R.Nandhini, M.D., Inst.of Pharmacology, MMC	: Member
5. Prof.K.Ramadevi, Director i/c, Inst.of Biochemistry, MMC	: Member
6. Prof.Saraswathy, M.D., Director, Pathology, MMC, Ch-3	: Member
7. Prof.S.G.Sivachidambaram, M.D., Director i/c, Inst.of Internal Medicine, MMC	: Member
8. Dr.Raghumani, M.S., Professor of Surgery, MMC	: Member
9. Thiru S.Rameshkumar, Administrative Officer	: Lay Person
10. Thiru S.Govindasamy, B.A., B.L.,	: Lawyer
11. Tmt.Arnold Saulina, M.A., MSW.,	: Social Scientist

We approve the proposal to be conducted in its presented form.

The Institutional Ethics Committee expects to be informed about the progress of the study and SAE occurring in the course of the study, any changes in the protocol and patients information/informed consent and asks to be provided a copy of the final report.

31/10/14

Member Secretary, Ethics Committee

CERTIFICATE FOR CONTENT VALIDITY

This is to certify that the tool constructed by Ms.Sangeetha. V. M.Sc. Nursing II year, College of Nursing, Madras Medical College which is to be used in her study titled **"A STUDY TO ASSESS THE EFFECTIVENESS OF SOYA MILK WITH HONEY CONSUMPTION ON REDUCING PHYSICAL AND PHYSIOLOGICAL SYMPTOMS AMONG THE POST –MENOPAUSAL WOMEN WITH IN AGE GROUP 40-60 YEARS AT CHOOLAI"** has been validated by the undersigned. The suggestions and modifications given by me will be incorporated by the investigator in concern with their respective guide. Then she can proceed to do the research.

Dr JOY PATRICIA

SIGNATURE WITH SEAL

Director
Institute of Community Medicine
Madras Medical College & RGGGH

NAME : Dr JOY PATRICIA PUSHPHARANI M.D.

DESIGNATION: Professor and H.O.D of Community Medicine

COLLEGE : Madras Medical College, Chennai-3.

PLACE: chennai-03.

DATE: 13.07.15

From

Deputy Commissioner (Health)
Public Health Department
Corporation of Chennai
Ripon Building, Chennai-600003

To

The Principal,
College of Nursing,
Madras Medical College,
Chennai-600003

HD.Roc.No.C1/ 4158/2015 Dt. 23.07.2015

Dear Madam,

Sub: Corporation of Chennai-Public Health Department-College of Nursing-Madras Medical College - Requesting permission for MSc-II year Nursing students study proposed at community area Choolai, Chennai- permission orders issued - regarding.

Ref: Your Letter Dt.07.07.2015.

With reference cited above, the Corporation of Chennai is happy to grant you permission to a study to evaluate the following subjects in selected urban area at choolai.

S.No.	NAME OF THE STUDENT	DISSERTATION TOPICS
1	Jaganathan Rajeswari	A study to assess the efectioveness of holy basil leaves extract in reducing blood sugar amoung diabetes mellitus clients in selected urban area at Choolai.
2	Ramya.A	A study to evaluate the effectiveness of amla juice with honey in the control of bloold pressure among hypertensive client in seleted urban areat at Choolai
3	Sangeetha.V	A study to assess the effectiveness of soya milk with honey consumption on reducing physical and physiological symptoms amoung the post-menopausal women with in age group 40-60 years at Choolai
4	Visithra J	A study to assess and compare the effectiveness of fenugreek leaves with elemental iron and elemental alone on anemia among women residing in selected community at Choolai.

The permission for the study is granted with the following conditions.

1. The study should be conducted as per the request. The study should be conducted in one month, from the date of permission.
2. The Corporation of Chennai will not provide any monitory or human resources support for the study.
3. The details of the study should be submitted to the City Health Officer (i/c), Corporation of Chennai by the candidates before any formal publication.
4. No wrong reporting of Corporation of Chennai should be carried out.

Best wishes,

For Deputy Commissioner (Health) 2/2

RATING SCALE- PRE TEST

s.no	age	hot flushses	sleep disturbance	night sweats	fatigue	vagianl dryness	headache	irritability	joint discomfort	breast tendernesss	palpitation	TOTAL	%
1	2	2	2	3	3	0	0	2	2	1	2	16	53.33
2	2	2	3	2	1	2	1	2	2	0	2	17	56.66
3	2	2	2	2	2	0	0	2	2	1	2	15	50
4	2	3	2	0	2	0	2	2	2	1	2	16	53.33
5	2	3	3	1	2	1	0	3	3	0	3	19	63.33
6	3	3	3	2	3	0	0	3	3	1	3	21	70
7	3	3	3	3	3	1	0	3	3	1	0	20	66.66
8	3	3	3	2	2	1	0	2	2	0	0	15	50
9	4	3	3	0	2	0	0	3	3	0	0	14	46.66
10	3	2	2	2	2	0	0	3	3	0	1	15	50
11	2	1	1	1	1	1	1	1	1	0	1	9	30
12	3	2	2	2	1	2	2	2	1	1	2	18	60
13	3	3	2	1	2	0	0	3	3	0	0	14	46.66
14	2	2	2	0	2	0	2	2	2	0	1	13	43.33
15	4	3	3	0	1	0	1	2	2	0	0	12	40
16	3	3	2	0	3	0	1	0	1	0	1	11	36.66
17	3	2	2	0	1	0	0	3	3	0	0	11	36.66
18	2	3	3	0	1	0	1	2	3	0	2	15	50
19	2	2	2	2	2	1	2	2	2	0	2	17	56
20	2	2	2	0	1	1	0	1	3	0	0	10	33.33
21	3	3	3	3	3	0	1	3	3	0	1	20	66.66
22	2	3	3	0	2	0	0	3	3	0	1	15	50
23	4	3	1	1	1	1	1	1	1	1	1	12	40
24	4	3	3	1	1	1	1	1	1	1	1	14	46.66
25	3	2	2	2	2	0	0	2	1	1	1	13	43.33
26	1	3	3	0	0	0	0	0	3	0	3	12	40
27	1	3	2	0	0	0	0	3	3	0	0	11	36.66
28	1	3	3	0	1	0	2	2	1	0	1	13	43.33
29	2	1	1	1	1	1	1	1	3	0	0	10	33.33
30	3	3	1	0	0	0	0	3	3	0	0	10	33.33

POST-TEST

s.no	age	hot flushes	sleep distubance	night sweats	fatigue	vaginal dryness	headache	irritability	joint discomfort	breast tenderness	palpitation	TOTAL	%
1	2	1	1	2	2	0	1	1	1	0	1	10	33.33
2	2	2	2	1	1	0	1	1	2	0	1	11	36.66
3	2	1	1	0	2	1	1	2	0	0	2	10	33.33
4	2	2	1	1	1	1	1	1	1	1	1	11	36.66
5	2	1	2	1	2	0	1	1	2	0	2	12	40
6	3	1	1	1	2	0	1	1	2	1	2	12	40
7	3	2	2	1	1	1	1	1	2	1	2	14	46.66
8	3	1	1	1	2	0	0	0	2	1	2	10	33.33
9	4	2	2	0	1	0	2	2	1	0	1	11	36.66
10	3	2	2	2	1	0	0	1	1	1	1	11	36.66
11	2	2	1	1	1	0	0	1	1	0	2	9	30
12	3	1	1	2	2	0	0	0	2	0	2	10	33.33
13	3	1	0	0	1	0	0	1	1	0	1	5	16.66
14	2	1	0	0	3	0	1	1	0	1	0	7	23.33
15	4	1	0	1	1	0	1	0	0	0	1	5	16.66
16	3	1	0	0	1	0	0	1	1	0	0	4	13.33
17	3	0	0	0	0	0	0	1	1	0	0	2	6.66
18	2	1	1	0	1	0	0	0	1	0	0	4	13.33
19	2	2	1	0	0	0	0	2	1	0	0	6	20
20	2	0	0	0	0	0	0	1	0	0	1	2	6.66
21	3	2	1	0	0	0	0	2	2	1	0	8	26.66
22	2	2	0	0	3	0	0	0	2	0	0	7	23.33
23	4	2	1	0	1	0	0	1	1	0	0	6	20
24	4	1	1	0	0	0	0	0	2	0	0	5	16.66
25	3	2	0	0	0	0	0	3	3	0	1	9	30
26	1	1	0	0	0	0	0	1	1	0	0	3	10
27	1	1	1	0	1	0	0	1	0	0	1	5	16.66
28	1	2	0	0	0	2	0	0	1	1	0	6	20
29	2	2	1	1	1	0	0	0	1	1	1	8	26.66
30	3	1	1	0	1	0	0	0	1	1	1	6	20

S.NO	AGE	RELGION	EDUCATION	OCCUPATION	INCOME	DIETARY HABITS	MARITAL STATUS	NO. OF CHILDREN	MEDICAL ILLNESS	MENOPAUSE AGE	UNDER ANY TREATMENT
1	2	2	2	4	3	2	1	2	4	2	2
2	2	2	2	1	3	2	1	2	4	1	2
3	2	1	2	4	3	2	3	2	4	3	2
4	2	2	2	2	3	2	1	2	4	1	2
5	2	1	2	2	2	2	1	1	4	2	2
6	3	3	2	1	3	2	1	1	4	1	2
7	3	1	2	1	3	2	2	2	4	2	2
8	3	3	4	1	3	2	3	3	4	2	2
9	4	1	1	4	2	2	1	2	4	2	2
10	3	2	2	1	4	2	1	2	4	3	2
11	2	3	3	1	2	2	1	3	4	2	2
12	3	1	2	1	3	1	3	2	4	3	2
13	3	1	4	1	3	2	3	2	4	2	2
14	2	3	3	4	2	2	1	2	4	2	2
15	4	1	1	4	2	2	3	1	4	1	1
16	3	2	3	1	4	2	3	1	4	2	2
17	3	3	2	1	4	2	3	3	4	2	2
18	2	2	2	3	3	2	3	3	4	2	2
19	2	1	3	1	4	1	1	1	4	2	2
20	3	1	2	1	4	2	3	2	4	2	2
21	4	3	3	1	2	2	1	3	3	3	2
22	3	1	3	1	3	1	1	3	4	1	2
23	2	1	1	1	3	1	1	3	4	1	2

24	2	3	1	1	2	2	1	3	4	1	2
25	3	3	1	1	3	2	1	2	4	2	2
26	1	1	4	1	3	2	1	1	4	2	2
27	3	1	2	1	2	2	3	1	4	2	2
28	2	3	4	3	3	2	1	2	4	1	2
29	3	2	4	4	2	2	1	2	4	2	2
30	3	1	2	1	3	2	1	2	4	2	1
	CONTROL GROUP										
1	3	1	2	1	3	1	1	1	4	1	2
2	2	1	1	1	3	2	1	2	4	2	2
3	2	1	2	4	3	2	1	1	4	1	1
4	2	1	3	2	3	2	1	1	4	2	2
5	4	1	4	1	3	2	1	2	4	2	2
6	4	3	4	1	2	2	1	1	4	2	2
7	2	1	1	1	3	2	3	2	4	1	2
8	2	1	2	1	3	2	1	3	4	3	2
9	3	1	2	1	3	2	3	3	4	1	2
10	3	2	2	1	3	2	1	1	4	1	2
11	2	3	2	1	3	2	1	1	4	2	2
12	3	1	2	1	3	2	3	2	4	2	1
13	1	1	2	1	3	1	3	2	4	2	2
14	2	1	2	1	1	2	3	3	4	2	2
15	4	1	1	1	1	2	1	1	4	3	2
16	3	1	2	1	3	2	3	2	4	3	2
17	3	1	1	1	3	2	1	1	4	1	2
18	2	1	3	1	4	2	1	1	4	1	2

19	2	2	4	1	1	2	3	2	4	1	2
20	2	2	2	3	2	2	1	2	4	2	2
21	3	3	2	3	3	2	1	2	4	1	1
22	2	3	2	1	3	2	1	3	4	3	2
23	4	1	2	1	3	2	1	2	4	1	2
24	4	1	2	1	3	2	3	1	4	2	2
25	3	1	1	2	3	2	3	1	4	2	2
26	1	2	2	3	3	2	1	3	4	1	2
27	1	1	2	2	3	2	1	1	4	3	1
28	1	1	3	1	3	2	1	1	4	3	2
29	2	2	2	1	3	2	1	2	4	3	2
30	3	1	1	1	2	1	1	2	4	2	1